

86 01171

✓ 7/23/86

GENERAL PLAN

Town of Portola Valley
California

INSTITUTE OF GOVERNMENTAL
STUDIES LIBRARY

JUL 23 1986

UNIVERSITY OF CALIFORNIA

GENERAL PLAN
Town of Portola Valley
California

Revised by Planning Commission on
September 15, 1982, Resolution No. 1982-241

/s/ Richard Merk
Richard Merk, Chairman

/s/ Randy Chafin
Randy Chafin, Secretary

Revised by Town Council on
November 10, 1982, Resolution No. 1009-1982

/s/ Jon C. Silver
Jon C. Silver, Mayor

/s/ Hazel Smith
Hazel Smith, Town Clerk

TOWN OF PORTOLA VALLEY

TOWN COUNCIL

Patti Williams, Mayor
Sue Crane
Kent Mitchell
Nancy Robertson
Jon C. Silver

PLANNING COMMISSION

Richard Merk, Chairman
Harry E. Weaver, Vice Chairman
Jean Eastman
John K. James
James H. Stanford

Contents

Page

INTRODUCTION

PLANNING AREA

Section 1000 PART 1 - SETTING, ASSUMPTIONS AND GENERAL POLICY

	THE PLANNING AREA AND THE REGION	1
	ASSUMPTIONS	4
	GENERAL POLICY	5
	Major Community Goals	5
	Functional Organization of the Planning Area	6
	Use of the Plan	8
2000	PART 2 - <u>LAND USE</u>	9
2100	LAND USE ELEMENT	10
	Introduction	10
	Residential Areas	12
	Parks, Recreation Areas and Open Spaces	22
	Commercial and Research - Administrative Institutions	24
	Portola Road Corridor	28
	Public Facilities and Services	31
		33
2200	OPEN SPACE ELEMENT	35
	Introduction	35
	Objectives	37
	Principles	38
	Description	39
2300	RECREATION ELEMENT	42
	Introduction	42
	Objectives	43
	Principles	43
	Standards	44
	Description	45
2400	HOUSING ELEMENT	49
	Introduction	49
	Existing and Projected Housing Need	49
	Household Characteristics	59
	Land Suitable for Residential Development	62
	Governmental Constraints on Housing	64
	Non-Governmental Constraints on Housing	67
	Special Housing Needs	69
	Energy Conservation	71
	Goals, Objectives and Policies	71
	Action Program	73

Contents (continued)

		Page
Section 3000	<u>PART 3 - CIRCULATION</u>	76
3100	CIRCULATION ELEMENT	77
	Introduction	77
	Objectives	78
	Principles	78
	Standards	79
	Description	80
3200	TRAILS AND PATHS ELEMENT	83
	Introduction	83
	Objectives	84
	Principles	85
	Standards	87
	Description	88
	Plan Diagram	90
3300	SCENIC HIGHWAYS ELEMENT	91
	Introduction	91
	Objectives	91
	Design Policies	92
	Description	93
4000	<u>PART 4 - ENVIRONMENTAL QUALITY</u>	96
4100	SEISMIC SAFETY/SAFETY ELEMENT	97
	Introduction	97
	Goals	99
	Objectives	99
	General Policies	99
	Acceptable Risk (In Relation to Structures and Occupancies)	100
	Potential Hazards in the Portola Valley Planning Area	101
	Policies	112
	Emergency Preparedness	117
	General Policies for Implementation	120
4200	CONSERVATION ELEMENT	121
	Introduction	121
	Objectives	122
	Principles	123
	Standards	124
	Description	124
4300	NOISE ELEMENT	128
	Introduction	128
	Motor Vehicle Noise	128
	Aircraft Noise	130
	Stationary and Quasi-Stationary Noise Sources	131

Contents (continued)

	Page
Section 5000 PART 5 - <u>COMPREHENSIVE PLAN DIAGRAM</u>	132

SUB-AREAS

6000	PART 6 - <u>SUB-AREA PLANS</u>	133
6100	NATHHORST TRIANGLE AREA PLAN	134
	Introduction	134
	Objectives	134
	Principles	135
	Standards	137
	Description	137
	Plan Diagram	141
6200	ALPINE PARKWAY PLAN	142
	Introduction	142
	Goals and Objectives	143
	Description	144
	Plan Diagram	149

FOLDED PLAN DIAGRAMS

Comprehensive Plan Diagram		Pocket 1
Trails and Paths Diagram)	(Pocket 2
Nathhorst Triangle Area Diagram)	(Pocket 3
Alpine Parkway Diagram)	(Pocket 4

APPENDICES

	Page
<u>Introduction</u>	
Appendix 1, Chronology of Amendments to the General Plan, Summary of Major Revision Programs and CEQA Compliance	
<u>A-1-Introduction</u>	
<u>Land Use Element</u>	
Appendix 1, Holding Capacity	A1-2100
Appendix 2, Implementation	A2-2100
<u>Open Space Element</u>	
Appendix 1, Open Space Proposal Matrix	A1-2200
Appendix 2, Open Space Element Work Program	A2-2200

Appendices (continued)

	Page
<u>Trails and Paths Element</u>	
Appendix 1, Implementation	A1-3200
<u>Seismic Safety/Safety Element</u>	
Appendix 1, References	A1-4100
Appendix 2, Modified Mercalli Intensity Scale	A2-4100
Appendix 3, Fire Hazards Map (Separate)	
<u>Conservation Element</u>	
Appendix 1, Work Program	A1-4200
<u>Noise Element</u>	
Appendix 1, Motor Vehicle Noise Analysis and Stationary and Quasi-stationary	A1-4300
<u>Nathhorst Triangle Area Plan</u>	
Appendix 1, Implementation	A1-6100
<u>Alpine Parkway Plan</u>	
Appendix 1, Implementation	A1-6200

INTRODUCTION

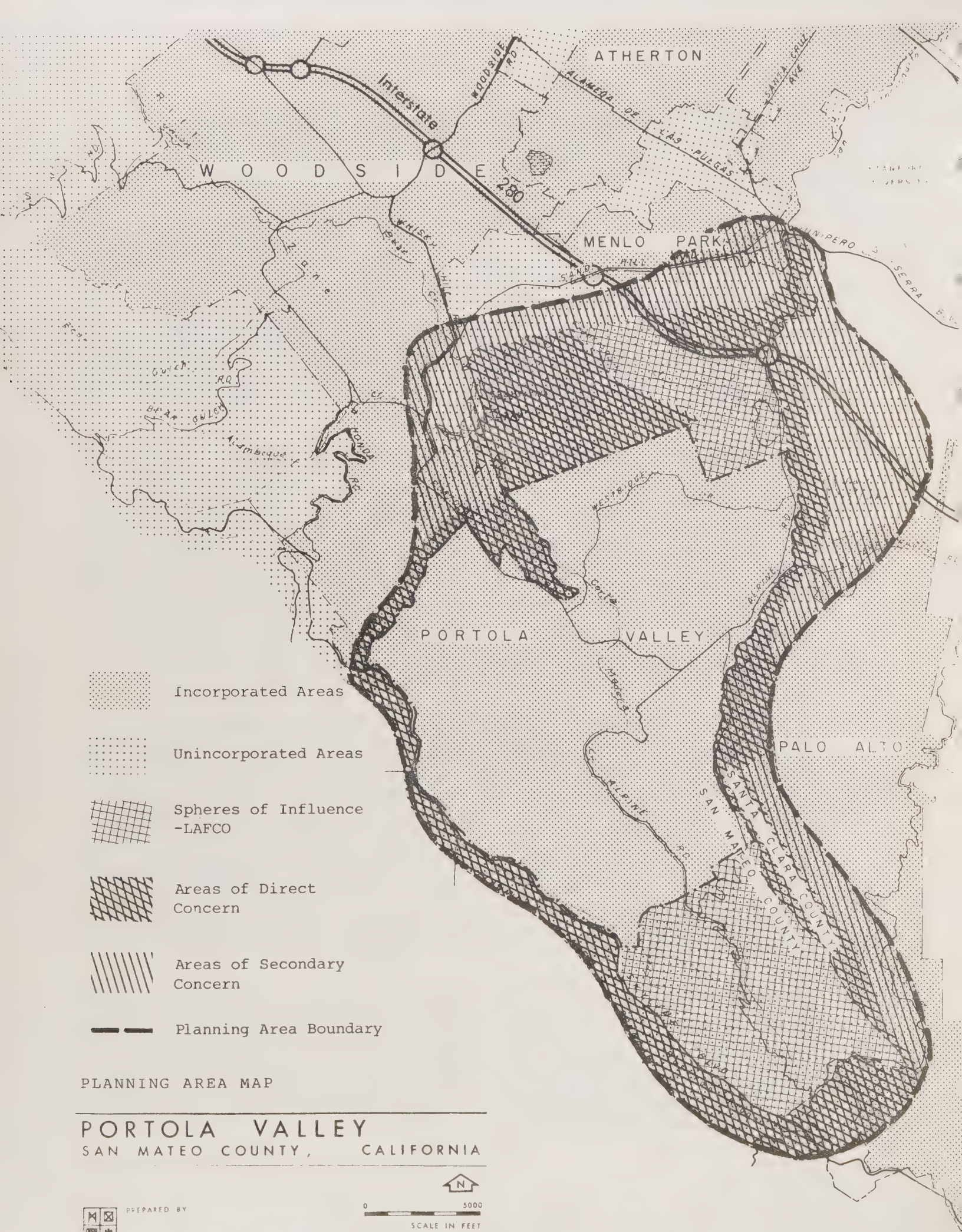
- 1 This document, Sections 1000-6200, constitutes the General Plan of the Town of Portola Valley, California. The plan has been developed pursuant to the state law governing local planning as found in Chapter 3, Title 7 of the Government Code. The planning area includes the Town and lands outside its boundaries bearing relation to its planning.
- 2 The appendices provide background information, statistical data derived from the plan, illustrations of plan concepts, and proposals for implementation. The appendices are supplementary information and are not a part of the General Plan unless specifically included in the plan by reference in Sections 1000 - 6200.
- 3 In order to meet changing conditions, incorporate results of more detailed studies and show more precisely what can now be foreseen only approximately, the plan is organized in sections so that amendment, when shown to be necessary, can be accomplished in an orderly manner. For convenient reference each paragraph is numbered.
- 4 The plan is a long-range, comprehensive and general guide to the future physical development of Portola Valley. It is intended that the majority of the proposals included in the plan be carried out over a span of time of 15 to 20 years. Some parts of the plan will need to be executed rather soon, while others can not be expected to be realized until later in the planning period.
- 5 The plan is comprehensive in that it deals with all of the land uses, services and facilities needed to make Portola Valley a functioning component of the Midpeninsula and the San Francisco Bay Area. Space has been allotted for all presently foreseen uses of land needed within the planning area to achieve the goals of the residents. These land uses and the necessary circulation facilities have been considered one in relation to the other in order to form a balanced and complete whole.
- 6 This plan includes the nine General Plan elements required by State law: land use, open space, housing, circulation, scenic highways, seismic safety, safety, conservation and noise. The plan also includes, as permitted by state law, a Recreation Element, a necessary basis for a certain provision of the subdivision ordinance and an important Town guide, and a Trails and Paths Element. The foregoing portions of the General Plan pertain to the entire planning area. In addition, two portions of the plan pertain to sub-areas of the Town: Nathhorst Triangle Area Plan and Alpine Parkway Plan.

- 7 The plan is general in nature and therefore does not indicate precise locations for land use and circulation facilities. Neither is each individual land use shown separately, but rather uses are indicated in general categories based on common characteristics. The degree of precision in the plan is geared to that needed to set forth major and critical relationships within the area and between the area and the rest of the Midpeninsula.
- 8 The General Plan should be evaluated annually to determine whether it continues to reflect the aims of the citizens and to provide a realistic guide for physical development. The plan should also be subjected to thorough review and updated at intervals of not greater than five years, so that it continues to cover a 15 to 20 year time-span. In this manner, although all proposals of the plan will not be fully achieved at any given time, it will continue to provide a long-range guide.
- 9 General plans for sub-areas of the planning area, when developed and adopted, shall become parts of the General Plan.
- 10 This plan is based on studies of natural physical conditions, land use, population growth and characteristics, trends in economic activities, traffic, governmental services and service areas, public facilities and related matters. The initial studies were presented in the "Basic Data Report: Portola Valley General Plan Studies" 1964. This report plus unpublished information in the Town and County Planning Commission files, provide the factual basis for the plan. A summary of major findings from the above-mentioned report is included in Appendix 1 of "General Plan Proposal, Portola Valley Area, 1964," adopted by the Town in 1965. More recent studies are described or referenced elsewhere in this document.
- 11 A broad range of programs for implementation are included in Appendix 5 of "General Plan Proposal, Portola Valley Area, 1964" adopted by the Town in 1965. This list of programs should still be relied upon to the extent it has not already been put into effect and is still appropriate.
- 12 The population (including The Sequoias) in the Town in 1980 was approximately 3,939, and in the planning area was 6,247.
- 13 Estimated dwelling unit and population holding capacities based on the policies of this plan are presented in Appendix A1-2100.

PART 1 - SETTING, ASSUMPTIONS AND GENERAL POLICY

THE PLANNING AREA AND THE REGION

- 1000 The planning area includes some 12,000 acres of mountainous and hilly land in the southern bayside portion of San Mateo County and northern Santa Clara County as shown on the Planning Area Map. The Town of Portola Valley occupies 5,750 acres of this area. The planning area consists largely of a naturally beautiful valley with steep, rugged tree covered and open mountains on the west and lower more gently rolling hills on the east. The San Andreas Rift Zone, an area of past and probable future earth movement, follows the floor of the valley. Much of the land southwest of the San Andreas Rift Zone consists of active or geologically recent landslides.
- 1001 The planning area includes considerable area outside the incorporated boundary of the Town of Portola Valley. This external area has been included because of its relevance to the planning for the Town. Inclusion of this area does not imply that the Town does or will ever have direct governmental control over all or any part of the area. It does imply, however, that existing and future land uses and circulation facilities in this area are of concern to the Town. In some instances the uses and facilities designated in the plan are a reflection of other jurisdictions' policies which the Town recognizes as given and which the Town assumes will continue to exist. In other instances, the uses and facilities represent only the Town's position as to their appropriateness.
- 1002 In addition to the Town of Portola Valley, the planning area includes the unincorporated communities of Ladera, Los Trancos Woods-Vista Verde and large undeveloped open and wooded areas in unincorporated portions of San Mateo County. Portions of the Town of Woodside, the City of Menlo Park, the City of Palo Alto and unincorporated areas in Santa Clara County have also been included because these areas are either functionally or visually related to Portola Valley and bear directly on its planning. On the diagram following, showing the extent of the planning area, three categories of areas outside the Town boundaries are indicated -- Spheres of Influence, Areas of Direct Concern, and Areas of Secondary Concern. Each category is discussed under a separate heading.
- 1003 Spheres of Influence. These are unincorporated areas designated by the San Mateo County Local Agency Formation Commission as being within the Sphere of Influence of Portola Valley. LAFCO will permit lands within these spheres to be annexed only to the Town of Portola Valley. The General Plan expresses firm Town policy for future development of these areas and provides the basis for rezoning and other effectuation measures required to carry out the General Plan.



- 1004 Areas of Direct Concern. These are incorporated and unincorporated areas which are of direct concern to Portola Valley. For these areas the General Plan expresses general Town policy providing a basis for collaborative programs or negotiations with the cities or counties having primary jurisdiction over these lands.
- 1005 Areas of Secondary Concern. These are incorporated and unincorporated areas of concern to Portola Valley, but to a lesser extent than "Areas of Direct Concern." Statements in the Plan pertaining to these areas should be interpreted as expressing Portola Valley's interests in these areas and being generally indicative of the Town's desires regarding their general character and quality.
- 1006 The limits of the planning area largely conform to recognizable physical features such as major thoroughfares, large non-residential areas, and natural topographic features. The Skyline Boulevard ridge forms the western boundary of the planning area and divides it from western slopes leading down to the Pacific Ocean.
- 1007 Portola Valley is closely tied to other parts of the San Francisco Bay Area. Residents of Portola Valley draw on other parts of the Bay Area for a wide range of cultural, commercial and recreation facilities. Employment centers throughout much of the Bay Area are within the reach of residents of the planning area. On the other hand, Portola Valley is a rather unique part of the Bay Area. It is an area of great natural beauty which is relatively close to major activity centers of the Bay Area. Hence it is attractive for those seeking a natural environment in which to make their home. Junipero Serra Freeway, Willow Road, and Skyline Boulevard provide the primary links to other parts of the Bay Area.
- 1008 Portola Valley is also part of a recognized sub-unit of the Bay Area, known as the Midpeninsula. Palo Alto serves as the hub of this area described as a District Area in the San Mateo County Master Plan. Major shopping and service facilities in downtown Palo Alto and the Stanford Shopping Center, the Stanford-Palo Alto Hospital Center and Stanford University form an important cluster of district serving activities. Major employment centers in the Midpeninsula are accessible to Portola Valley by car and limited public transportation. As a part of the Midpeninsula, Portola Valley is important as a low-density residential area set in a natural environment, as a large natural scenic area to balance the intensively developed urban areas to the north, and as a resource for residents of nearby areas seeking a brief outing. Within the planning area, opportunities exist for varied recreational activities.

ASSUMPTIONS

- 1009 The General Plan is based on certain general assumptions which recognize external forces over which there is little or no local control. These assumptions include generally accepted forecasts; however, they are set forth here in the form of assumptions inasmuch as they cannot now be proven to be correct.
1. It is anticipated that the economic and social structure of the nation, California and the Bay Area will undergo significant changes in the future; however, because the nature, rate and extent of such changes are not well known at this time, it is assumed that in the near future they will not be of a magnitude to cause major alterations in development patterns in Portola Valley.
 2. The shortage of fossil fuels which gained widespread recognition in 1974 will cause Americans to reconsider their use of natural resources over the coming years. This will result in greater recycling of materials, production of a more efficient means of transportation, decreased use of non-renewable energy sources, increased use of renewable energy sources, improved building insulation, greater use of energy efficient devices, and changes in life styles. The changes in life style will tend toward less usage of the private automobile, towards a concentration of population in urban areas, and towards Portola Valley being populated by those persons who choose a rural atmosphere, knowing that either they will have to reduce their intercommunity travel, or will have to pay substantially more for it. A shortage of fuel and other resources may change the life style of Portola Valley residents, may affect the rate of development in the Town and may make a substantial change in the physical form of the Town; however, at this time the certainty and implications of such shortages are not sufficiently known to provide a basis for major changes in planning for the Town.
 3. There will be an increase in leisure time which will make available to Bay Area residents more time for political, cultural, social, educational, and recreational activities.
 4. The rate of population growth in California, the Bay Area, and the Midpeninsula will be substantially slower between the years 1970 and 1990 than it was between 1950 and 1970.
 5. Despite reduced population growth, the demand for housing in the Midpeninsula Area will continue to be strong, because of the attractiveness of the area.

6. Transportation between Portola Valley and other parts of the Bay Area will change with greater reliance placed on public transportation, because of the scarcity of energy resources. Transportation by private automobile will remain at about its present level of convenience and transportation by bus in particular will become more convenient.
7. Although convenience shopping will be available locally for Portola Valley residents, many of their needs for goods and services will continue to be satisfied through outlets and facilities in other parts of San Mateo County, in Santa Clara County and in the Bay Area.
8. In areas adjoining Portola Valley, control of development through zoning, subdivision regulation and other measures will be adequate to prevent conditions such as traffic congestion, noise, glare, flooding, sedimentation, and unsightly views which could adversely affect properties in Portola Valley.

GENERAL POLICY

MAJOR COMMUNITY GOALS

- 1010 The goals included below are general in nature and basic to the entire General Plan. Goals related to specific aspects of the plan are stated in other appropriate sections. The plan is designed and intended to assist in achieving these major local goals:
1. To preserve and enhance the natural features and open space of the planning area because they are unusual and a valuable asset for the planning area, the Peninsula, and the entire San Francisco Bay Area.
 2. To conserve the "rural" quality of Portola Valley and maintain the Town as an attractive, tranquil, family-oriented residential community compatible with the many physical constraints and natural features of the area.
 3. To provide for those commercial and institutional uses which are needed by residents of Portola Valley and its spheres of influence on a frequently recurring basis and which are scaled to meeting primarily the needs of such residents.
 4. To provide scenic roads, trails and paths to enhance enjoyment of the planning area and to increase convenience and safety.
 5. To provide civic and recreation facilities and activities desired by local citizenry and which encourage the interaction of residents in the pursuit of common interests and result in a strong sense of community identity.

6. To ensure that development in the planning area will produce a maximum of order, convenience and economy for local residents consistent with other stated objectives.
7. To guide the location and construction of developments so as to reduce the exposure of people and improvements to physical hazards such as landslides, fire, floods and traffic accidents.
8. To minimize the need for additional governmental services so as to maintain and preserve the Town's predominately volunteer local government.
9. To subject new developments with potential for adverse fiscal and other effects on the delivery of essential public services to an impact analysis so as to avoid unreasonable financial burdens on the Town and other affected local governmental agencies and ensure the continued availability of essential public services.
10. To guide the location, design and construction of development so as to minimize the use of non-renewable energy sources and to encourage energy conservation and use of renewable energy sources.
11. To ensure that growth and development within the planning area is evaluated against accepted regional environmental standards.
12. To work with neighboring communities when appropriate to identify and develop solutions to interjurisdictional problems.
13. To consider a growth management plan which regulates the timing of construction in the different areas of Town in a manner generally consistent with other principal objectives of the General Plan.

FUNCTIONAL ORGANIZATION OF THE PLANNING AREA

- 1011 The major land use and circulation features of the General Plan are briefly described in the following paragraphs to provide an overview of the plan. These and other features are graphically illustrated on the Comprehensive Plan Diagram, found separately in this document.
- 1012 The land uses and circulation system proposed in the General Plan derive from and recognize the location and role of Portola Valley in the San Francisco Bay Area and the Midpeninsula. These proposals are also determined and conditioned by the shape of the valley, and the rugged topography and natural beauty of the area. Within the planning area, the proposals for land use and circulation recognize the existing development as setting the general framework for further development.

- 1013 The spectrum of land use and circulation proposals conforms to the concept of Portola Valley as a major open space within the larger urbanized region. Thus, the intensity of land uses, the distribution of land uses, and the standards for development all reflect the recognition that the natural beauty of the area is its prime asset, important both to local residents and to the Midpeninsula and Bay Area.
- 1014 Commercial and institutional uses serving all or most of Portola Valley are grouped in areas on the floor of the valley along Portola and Alpine roads. Residential land use intensities tend to be highest on the more level lands near commercial and institutional uses and decrease outward as terrain becomes more difficult for development and distances from community facilities and major thoroughfares increase. Another concentration of commercial and institutional uses is located in Ladera to serve the local population.
- 1015 Employment areas along Sand Hill Road in the northern portion of the planning area (areas of "Secondary Concern") are close to more intensively developed areas to the east and are well served by major thoroughfares.
- 1016 The important skyline ridge on the western side of the planning area is proposed to be developed as a parkway in which the existing character of the terrain and natural vegetation would be retained. Elsewhere in the planning area major creeks are to be retained and enhanced as important natural features. Major emphasis is placed on the retention of natural land forms and vegetation in all development proposals for the planning area.
- 1017 Two major thoroughfares provide for the primary movement into and out of the planning area: Sand Hill Road-Willow Road and Alpine Road. The Junipero Serra Freeway (Route 280) provides for movement by motor vehicle connecting the planning area with parts of the Bay Area to the north, and south and indirectly to the east.
- 1018 Skyline Parkway, La Honda Road and Alpine Road west of Skyline Boulevard provide access from the area to the more western parts of San Mateo County, the recreation areas in Santa Cruz County, and the western part of Santa Clara County.
- 1019 Within the planning area a system of arterials, major collectors and minor collectors link the various parts of the area and provide access to the community facilities and services. A system of trails and paths provide for movement on foot, horseback or bicycle.

USE OF THE PLAN

1020 The General Plan is a complex document which has been carefully prepared to provide an internally consistent set of policy statements to guide the growth and development of Portola Valley. Part 1 includes the most general policies pertaining to the entire planning area. Parts 2-4 describe more specific policies of significance to the planning area. Part 5, the Comprehensive Plan Diagram, graphically illustrates many of the proposals contained in Parts 1-4. Part 6 deals in greater detail with specific parts of the planning area. Thus, to find the range of policy statements relevant to a particular subject, the user may need to refer to several parts of the plan. By and large, policy statements are not repeated in the plan. In all instances, the more detailed policies with respect to a specific topic take precedence over more general policies. Also, as amendments are made to the plan, they supersede all previously stated inconsistent policies.

PART 2- LAND USE

2000 The elements in this part describe all types of uses of land in the planning area. The Land Use Element provides the most comprehensive land use guidance while the Open Space, Recreation and Housing Elements address selected land use categories. Environmental quality policies which pertain throughout the planning area and are thus not tied to specific land uses are included in Part 4 - Environmental Quality. Also, for certain portions of the planning area, more detailed land use policies are necessary and are included in Part 6 - Sub-Area Plans.

LAND USE ELEMENT

INTRODUCTION

- 2100 The Land Use Element sets forth guidelines for land occupancy and describes the location and distribution aspects of land uses. Land use interrelationships and land use circulation relationships are also defined.
- 2101 Land use proposals in the plan include those for residential areas, those for community facilities and services, and those for region-serving facilities. For the purposes of this plan, all land uses are grouped into the following categories: residential areas; parks, recreation areas and open spaces; institutions; commercial and research - administrative areas; and public utilities. In the following sections, under headings for each of the above major categories, objectives, principles, and standards are given and are followed by a description of the plan proposals.
- 2102 General Objectives
1. To provide for residential uses and related facilities and services that will preserve and enhance the quality of living enjoyed by local residents.
 2. To maintain the natural character of the planning area and to provide for limited park, recreation and open space uses in appropriate scenic areas where the uses will be compatible with the maintenance of the residential nature and quality of the planning area.
 3. To minimize the need for non-local traffic to penetrate the planning area.
 4. To minimize consumption of energy from non-renewable sources and to encourage the use of renewable energy sources while preserving the scenic and aesthetic qualities of the area.
 5. To encourage and, where appropriate, require the conservation of water in new and existing developments and buildings.

2103 General Principles

1. The planning area should have the low intensity of development which is appropriate to its location on the fringe of the urban area of the peninsula and should provide a transition between urban densities of adjoining communities and non-intensive land uses west of the skyline.

2. Uses of land should include homes, open spaces, agricultural pursuits, and such other private, office, and commercial uses as are required to serve the frequent needs of local residents.
3. In addition to uses serving primarily local residents, public, private, and limited commercial recreational facilities serving a broader area would be appropriate in locations on the periphery of the planning area but so located as not to encourage traffic through the Town.
4. Those public and private facilities such as schools, parks, churches, public buildings, stores and offices which serve all or a major portion of the planning area should be grouped in readily accessible centers to the greatest extent permitted by site and location requirements of the individual facilities.
5. In any development within the planning area, full consideration should be given to the geologic conditions so that development on unstable land can be avoided, or minimized.
6. Buildings should be of a size and scale conducive to maintaining the rural residential atmosphere of Portola Valley. The architectural scale of non-residential buildings (as differentiated from size) should be more similar to that of residential buildings than that of monumental buildings.
7. Non-residential buildings should generally be of small or moderate size and, where groups of buildings are used, connected by plazas, terraces, porches, arcades, canopies or roofs to provide a pleasant environment and safety and shelter to pedestrians.
8. Landscaping should be installed and adequate space provided wherever necessary to minimize the adverse effects of higher intensity uses upon lower intensity uses.
9. In all developments in the planning area full consideration should be given to fire protection needs and adequate measures should be taken to ensure that these needs are met.
10. The rate of development and location of projects should not exceed the capacity of the Town, special districts and utility companies to provide all needed services and facilities in an orderly and economic manner.
11. Conservation of energy from non-renewable sources should be considered in the design, improvement, reconstruction and remodeling of buildings.

12. The potential for use of passive and active solar energy should be considered in the siting, design and construction of buildings.
13. Where feasible, development proposals should incorporate unified planning for the largest land area practically possible in order to maximize the opportunities for controlling the extent and impacts of development, preserve open space, conserve unique natural features of the area, allow logical extensions of the trail and paths system and otherwise help ensure the application of good land use planning principles.
14. Grading shall normally be the minimum necessary to accommodate development; however, in those instances where increased grading can provide for greater compatibility of development with the natural setting and not cause significant adverse effects on the environment, such grading shall be preferred.
15. For all new developments within the planning area, full consideration shall be given to the fiscal ability of the Town and other affected local governmental agencies to provide essential services.
16. In the planning, design, construction and operation of development within the planning area, full consideration should be given to water conservation.

RESIDENTIAL AREAS

2104 Objectives

1. To assure that all building sites and residences are developed in a manner minimizing disturbance to natural terrain and vegetation and maximizing preservation of natural beauty and open space.
2. To organize residential areas in a manner providing maximum convenience in the daily use of local facilities such as parks, recreation area, commercial facilities, and access to major roads, consistent with the attainment of other objectives stated within the General Plan.
3. To provide for the grouping or clustering of residential buildings where this will maximize the opportunity to preserve natural beauty and open space without generally increasing the intensity of development otherwise possible.
4. To maintain the present character of established residential areas.

5. To control the occupancy of parcels so as to:
 - a. Prevent overcrowding of dwellings.
 - b. Insure that occupancy of land and dwellings will be in balance with service facilities such as on-site parking, traffic capacity of access streets, and capacity of utilities such as water and sewage disposal.
 - c. Insure against adverse impact on neighboring residences.
 - d. Fix responsibility for use, occupancy and conduct on the premises in relation to Town standards and requirements. That is, on each parcel and in each main dwelling, someone must be "in charge" as owners or tenant of the owner.

2105 Principles

1. Lands indicated for residential use on the plan diagram should be used primarily for residential living, a use of land characterized by a single household occupying a main detached dwelling as the principal use of a parcel, together with uses and structures customarily accessory to a main dwelling in a rural residential community.
2. In addition to other accessory uses and structures, accessory living quarters within the main dwelling or in a separate structure should be deemed appropriate accessory uses on parcels large enough and under conditions adequate to insure the objectives cited in Sec. 2104.5 are met. Specific limits on accessory living quarters should be included in the zoning ordinances.
 - a. Agricultural uses are encouraged as interim or long-term uses in residentially designated areas provided they are compatible with nearby nonagricultural uses and do not result in the degradation of the natural environment.
3. Population densities within the planning area should be guided by considerations of topography, geology, vegetative cover, access to transportation and service facilities, and other factors as follows:
 - a. The highest densities should be located on relatively level land close to local shopping and service areas, other local facilities, and transportation facilities. Densities should decrease as the distance from these facilities increases.
 - b. Population density should decrease as steepness of terrain increases.

- c. The lowest densities and largest lots should be located on the steepest hillsides on which the Town allows development and in mountainous areas where it is necessary to limit storm runoff, prevent erosion, preserve existing vegetation, protect watersheds, avoid potentially unstable ground, and maintain the scenic quality of the terrain.
- 4. Steep slopes, potentially unstable ground, canyons and ravines should be left undisturbed as residential open space preserves.
- 5. Tree covered buildable slopes should be maintained as wooded conservation areas in which trees should be preserved to the maximum extent possible.
- 6. When residences are grouped or clustered in areas where intensity standards require one acre or more per dwelling unit:
 - a. Each residence should have substantial direct frontage on a common open space of sufficient size to convey a feeling of being on the edge of a large and significant open space.
 - b. Clusters should generally consist of a small number of detached residences, and each cluster should be well separated from adjacent clusters rather than interconnected in a linear form.
- 7. To the maximum extent possible, all structures (including residences) should complement and blend in with the natural setting of the planning area; and to this end, the following principles should be adhered to:
 - a. Structures may be located in existing tree covered areas to the extent possible and still be consistent with slope, geologic and related conditions and the need to preserve locally unique or especially beautiful wooded areas.
 - b. Largely bare slopes and sparsely wooded ridges visible from large portions of the Town or planning area should be kept free of structures to the maximum extent possible.
 - c. If development does take place on highly visible barren slopes or ridges, it must be unobtrusive and designed to maintain the character of the natural setting.

Standards

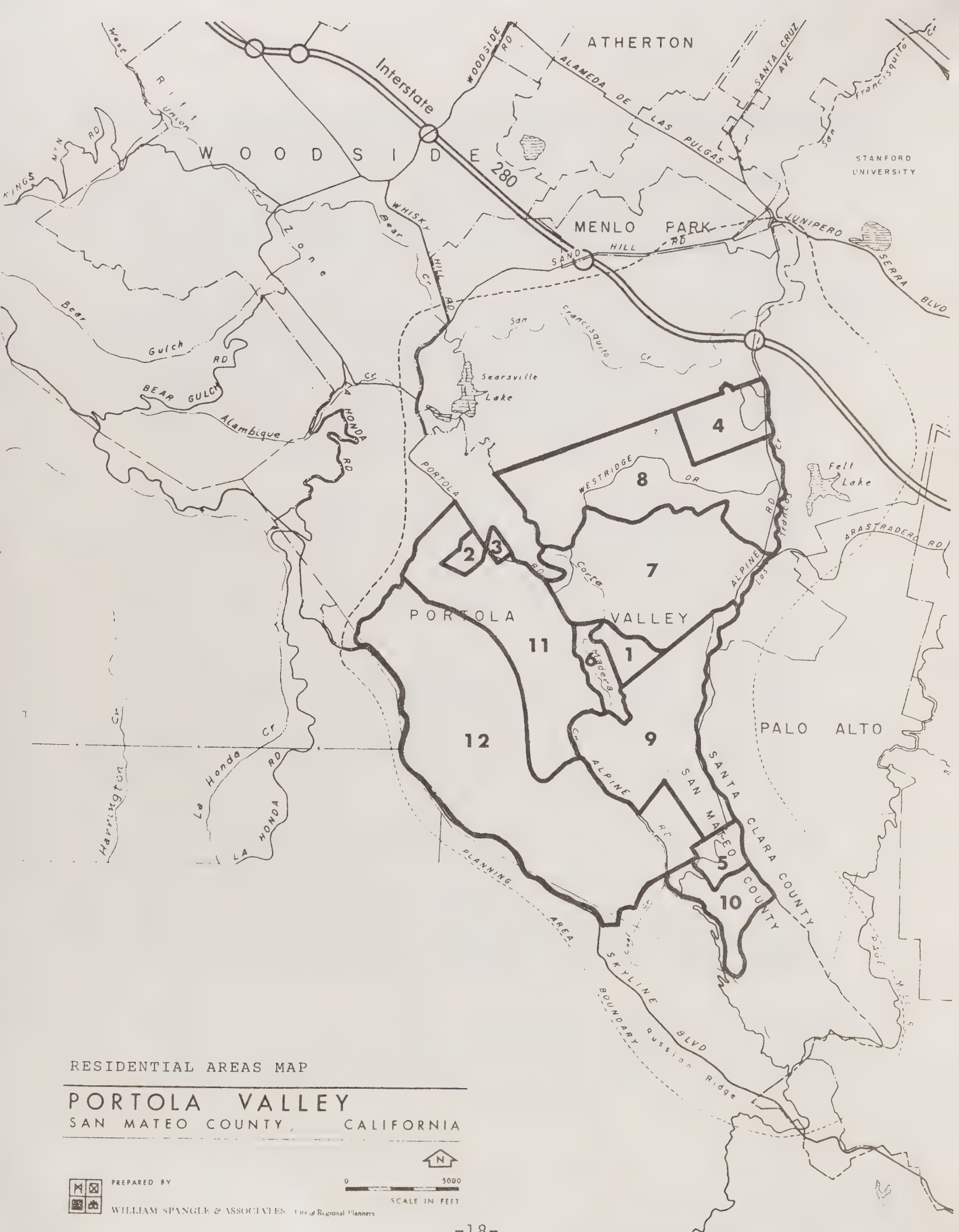
- 2106 Residential areas are shown in four land use intensity categories:
1. Low-Medium -- Existing developed areas where net residential land area per housing unit is less than 1 acre.
 2. Low -- Existing developed areas where net residential land area per housing unit averages from 1 to 2 acres. These areas are generally geologically stable, in only moderately steep terrain and have good accessibility.
 3. Conservation-Residential -- Includes:
 - a. Existing developed areas where net residential land area per housing unit averages from 2 to 4 acres.
 - b. Relatively accessible undeveloped lands with few to considerable potential geologic instabilities. To be developed with a slope-intensity standard whereby the net residential land area per housing unit increases from 2 acres on level to 9 acres on slopes of 50 percent or greater.
 4. Open Residential -- Relatively inaccessible sparsely developed and undeveloped areas generally with extreme geologic instabilities. Fire hazards are often high and erosion potential great. To be developed with a slope-intensity standard whereby the net residential land area per housing unit increases from 3 acres on level land to 18 acres on slopes of 50 percent or greater.
- 2106a Within these residential areas, slopes, canyons and ravines generally in excess of 30% in slope, unstable lands and lands inaccessible without traversing potentially unstable lands are classified as "residential open space preserves". To the maximum extent possible these preserves should be kept free of structures and left in a natural condition with respect to terrain and vegetation; however, on lands also shown as open residential, residences would be appropriate where acceptable development standards for access, utilities and geologic stability can be met. Low intensity recreation uses would be appropriate in residential open space preserves, and drainage and erosion control measures should be undertaken where necessary.
- 2106b The slope-intensity standards for the conservation residential and open residential categories recognize in part the overall problems of the development in areas with potential geologic instabilities; however, the intensity of development in individual developments should be further reduced as necessary to reflect specific geologic conditions encountered.

- 2106c Residential development and related improvements should be permitted only where geologic stability meets the standards of the Town for the specific uses.

Description

- 2107 Residential areas of low intensities are the predominant land use proposed in this General Plan. Four categories of residential land use intensities are indicated. The low-medium and low intensities are restricted to areas of existing development. The conservation residential intensity is assigned to less steep land close to community and circulation facilities and existing development, and the open residential intensity is applied to most undeveloped lands which have generally rugged topography, are further from community facilities and major circulation routes and have extreme geologic instabilities. These several residential intensities are similar to and compatible with intensities existing and proposed for most areas adjacent to the planning area.
- 2108 Land use intensity standards provide a guide for the intensity of residential development within which considerable flexibility remains as to design solutions. They indicate the number of dwelling units to be permitted on a given piece of land but do not prescribe type of design in relation to a minimum lot standard.
- 2109 Superimposed upon the residential land use indications on the Comprehensive Plan Diagram are two tree symbols, one representing wooded conservation area and the other residential open space preserve. Residences should be located on the buildable land and carefully sited so as to preserve existing trees and other vegetation. The residential open space preserve should be primarily a permanent open space, but should in addition accommodate a variety of recreational uses well suited to the natural terrain such as riding and hiking trails, informal play areas, scenic walks, picnic areas, and residences subject to suitable conditions (see foregoing standards). These areas can be either privately controlled by the local property owners or held by a public agency.
- 2110 The delineation of the wooded conservation areas and the residential open space preserves is intended to be general in nature. As specific areas develop, it will be necessary to apply with care the objectives, principals and standards set forth in this plan in the preparation of detailed designs.
- 2111 Based on an evaluation of the slope and geologic constraints for each residential area, estimated holding capacities have been prepared and are included in Appendix A1-2100. The holding capacity figures represent the maximum number of dwelling units estimated to be feasible under the criteria included in this plan.

- 2112 Each residential area is described separately below and shown on the Residential Areas Map on the following page.
- 2113 Residential Area No. 1. This area comprises the Brookside Park and Brookside Orchard Subdivisions. The low-medium intensity recognizes the long-established character of the area. The area is almost fully developed with homes. Attention should be continually given to conserving and enhancing this residential area.
- 2114 Residential Area No. 2. This area comprises the Woodside Highlands Subdivision. The low-medium intensity recognizes the character of this old subdivision. Originally an area of summer homes, this area has been converted to year-around living, is served by narrow roads, individual sewage disposal systems, and includes some areas of unstable ground. Some few lots are without homes. Continuing attention should be given to improving the quality and amenities of this area while protecting its individual character.
- 2115 Residential Area No. 3. This area comprises the Portola Redwoods Subdivision. The low-medium intensity is consistent with the long-established nature of this subdivision. Virtually all lots are developed with homes. The character of this small residential area should be preserved and continual attention should be given to maintaining appropriate land use relationships between this area and surrounding and nearby non-residential uses.
- 2116 Residential Area No. 4. This area, in the Town's sphere of influence, comprises the Ladera Subdivision. The low-medium intensity recognizes the established character of this area. The area contains but a very few vacant lots. The existing character of Ladera should be maintained and attention should be continually given to assuring compatibility of uses on the Webb Ranch with the residential character of Ladera.
- 2117 Residential Area No. 5. This area, in the Town's sphere of influence, consists of the Los Trancos Woods Subdivision. The low-medium intensity is consistent with the character of the long-established residential area. Originally an area of summer homes, it is now used for year-around living, is served by narrow roads, individual sewage disposal systems and is affected by some areas of geologic instability. Some lots are still vacant. Efforts should be made to improve the quality and amenities of the area while preserving its character.



RESIDENTIAL AREAS MAP

PORTOLA VALLEY

SAN MATEO COUNTY, CALIFORNIA



PREPARED BY

WILLIAM SPANGLE & ASSOCIATES City & Regional Planners



2118 Residential Area No. 6. This area is comprised of the Willowbrook Subdivision, with parcel sizes of 1 acre or more, and several larger parcels along the eastern side of the area. The area is shown in the low intensity category and is virtually developed with homes. The character of this area should be preserved and efforts should be made to reduce through traffic.

2119 Residential Area No. 7. This area is comprised primarily of the Arrowhead Meadows, Alpine Hills, Hillbrook, Stonegate, Stonegate Meadows, Corte Madera Acres, Palmer Estates, Portola Terrace, Portola Heights and Pine Ridge subdivisions. All of these subdivisions have minimum parcel sizes of 1 acre or more. In addition, there are unsubdivided areas of larger parcels, namely in the vicinity of Georgia Lane. The entire area is shown in the low intensity category.

2120 As the unsubdivided areas are developed, attention should be given to ensuring careful integration into the largely already developed area so as to ensure compatibility. Particular attention will need to be given to land use relationships in the vicinity of the non-residential uses along Portola and Alpine Roads.

2121 Residential Area No. 8. This area is comprised of the Westridge and Oak Hills Subdivisions plus a steep undivided area between Westridge and Alpine Hills Subdivision. The area is shown in the conservation residential intensity. Few lots are vacant in the subdivisions. The character and quality of the area should be conserved as the area plays an important part in maintaining the open space character of the Town.

2122 Residential Area No. 9. The development pattern for a large portion of this area has been set by the Portola Ranch Subdivision where there are slightly in excess of two acres per dwelling unit. Most of the balance of the area is in large ownerships. The area is shown in the conservation residential intensity category.

2123 The area has good access to local Town roads, most utilities, schools and shopping. Parts of the area are quite stable geologically, while other parts are highly unstable, and slopes range from moderate to steep. The plan diagram indicates large areas in the residential open space preserve category.

2124 In the area along Alpine Road, any development should be kept well back from the road up on the slopes so as not to encroach on the Alpine Parkway, Portola Road corridor and Nathhorst Triangle Area.

2125 Residential Area No. 10. This area, in the Town's sphere of influence, is comprised of the Vista Verde Subdivision. The area is shown in the conservation residential intensity category. There are many vacant lots in the subdivision. Geologic instabilities in the area warrant careful continuing evaluation as additional homes are built.

- 2125 Residential Area No. 11. This area is comprised of the lower portion of the western hillsides and is unsubdivided except for the old Coombsville Subdivision, which occupies a small part of the area. The area is shown in the conservation residential intensity category. It is characterized by gentle to steep slopes, geologically stable to unstable lands and grass covered slopes to tree covered canyons. The major development potential on the western slopes is confined to this area which has the advantages of greater accessibility to roads, utilities, schools and shopping, is less steep and enjoys somewhat more stable lands than the upper portion of the western hillsides.
- 2126 Most of the undeveloped portion of this area is in a few large holdings. This provides an opportunity for imaginative designs making full use of the range of natural features present. It should be possible and practical to preserve a large amount of the area in a natural state. In particular, it is desirable that the natural character of the open ridge leading up to the Windy Hill Open Space Preserve be retained.
- 2127 Residential Area No. 12. This area is comprised primarily of the upper portion of the western hillsides. It is similar in character to residential area No. 11; however, it is more removed from local Town roads, utilities, schools and shopping, has steeper slopes, has a significantly colder, more foggy and more windy climate and is somewhat less geologically stable. The most feasible access appears to be from Skyline Boulevard and fire protection is minimal. Its reduced density is compatible with the adjoining agricultural, recreational, and forest resource region west of Skyline Boulevard. This area is shown in the open residential intensity category.
- 2128 It is envisioned that development in this area will be minimal. The foregoing factors make the area unsuitable for more than very sparse development. Large areas are shown in the residential open space preserve category. Any development in this area should have adequate access by roads which insure prompt access to and from public facilities and commercial areas, and for fire, police, and other emergency services.
- 2129 The barren ridge leading up to Windy Hill from the east is a visually dominant feature of Portola Valley and highly noticeable from much of the Midpeninsula Area. It should be kept free of the works of man to the maximum extent possible. Development which might go on these lands should preferably be located elsewhere on the same parcel of land. If any development takes place in this area, extreme care should be taken to ensure absolute minimum disruption of existing visual characteristics.
- 2129a A small portion of the area lies east of Alpine Road next to Los Trancos Woods and Vista Verde. This area is included because it is similar to the balance of the area in terms of remoteness and geologic instability.

Other Residential Areas

- 2130 In addition to the twelve residential areas described above, there are several other residential included within the planning area. These areas, although in other jurisdictions, are of concern to the planning area because of common problems relating to drainage, circulation, public facilities, and visual amenities.
- 31 The portion of the Town of Woodside northeast of Portola Road and known as Hidden Valley Farm and Family Farm is shown on the plan diagram because of its close physical relationships to Portola Valley. This area is shown as conservation residential and is consistent with the Town of Woodside's General Plan. There is a need to maintain compatible land use relationships between Hidden Valley Farm and the non-residential uses fronting on Portola Road within the Town of Portola Valley.
- 00 The portion of the Town of Woodside along the Portola Valley Town boundary between Portola Road and Skyline Boulevard is included because of the need to maintain compatible land uses on either side of the Town boundary. The area in Woodside is shown as conservation residential and is consistent with the Woodside General Plan.
- 030 Two areas of low-medium intensity are shown on the Comprehensive Plan Diagram in the northern portion of the planning area: the Stanford Hills Subdivision and the Stanford Weekend Acres area. The inclusion of these areas at these intensities indicates concurrence with plans of Menlo Park and San Mateo County. Continued attention to traffic control measures along Alpine Road in the vicinity of Stanford Weekend Acres appears warranted in order to help assure traffic safety.

PARKS, RECREATION AREAS AND OPEN SPACES

2134 Objectives

1. To retain areas of natural terrain and vegetation sufficient to preserve the overall natural open character and quality of the area while permitting reasonable development of private lands.
2. To provide for appropriate park and recreation areas for community and neighborhood use.
3. To encourage public parks, recreation areas and open spaces serving other than primarily local residents only in locations where they will not be a disruptive influence on local residents and where they will preserve unique natural resources for use by residents of the larger region.

Description

2135 Extensive parks, recreation areas, and open spaces are set forth in the plan. Each proposal is based upon the natural resources of the planning area and related to the needs of local residents, Midpeninsula residents, or other Bay Area residents. The wide range of proposals under the general topic of park, recreation and open spaces, are described in separate elements of the plan. These proposals and the elements in which they are described are indicated below:

<u>Primarily Park, Recreation or Open Space</u>	<u>Park and Recreation Element</u>	<u>Open Space Element</u>	<u>Trail & Path Element</u>	<u>Scenic Highways Element</u>	<u>Land Use Element</u>
Neighborhood Preserve	X				
Neighborhood Park	X				
Community Preserve	X				
Community Park	X				
Other Community Parks or Preserves	X				
Regional Park or Private Regional Facility	X				
Open Space Preserve		X			
Parkway	X				
Greenway	X				
Open Space Limited Development		X			
Agriculture		X			
<u>Secondarily Park, Recreation or Open Space*</u>					
Wooded Conservation Areas					X
Residential Open Space Preserves					X
Trails and Paths			X		
Scenic Highways				X	

* These land use categories serve primarily for residential or circulation purposes, but have secondary uses as parks, recreation areas or open spaces.

2136 Each park or recreation area proposed is so located and served by circulation facilities that it can be reached and used by the intended users without interfering with the enjoyment of nearby areas. Thus, facilities serving other than primarily local residents should be located on the edges of the planning area accessible from major thoroughfares.

2136a It is recognized that the general plan diagram shows certain park, recreation area and open space uses on privately owned land. It is anticipated that some of these proposals will be implemented through appropriate dedications pursuant to planning regulations when private development takes place. In some instances, rights in land may be purchased by the Town or other appropriate agency. In other instances, the private use of the land for a recreation or open space use constitutes conformity with the plan. Nonetheless, there may be instances when a property owner wishes to put land to a use not shown on the general plan diagram(s) and the Town or some other public agency is not able to obtain public rights through regulation and does not negotiate a purchase with the owner. In such instances and only for lands designated on the general plan diagrams(s) for neighborhood preserve, community preserve, other community, parkway and greenway, the General Plan hereby permits:

- 1) private use of a character and intensity no greater than the public use indicated on the general plan diagram(s), or
- 2) private use at the lowest residential intensity suitable for the property.

In implementing the foregoing policy with respect to any proposal by a property owner, the approving authority of the Town shall exercise judgement in approving a use to ensure compatibility with surrounding and nearby uses, circulation facilities and the applicable objectives of this General Plan. Any use permitted must, of course, conform to the zoning for the property.

COMMERCIAL AND RESEARCH-ADMINISTRATIVE

2137 Objectives

1. To provide goods and services to satisfy the most frequently recurring needs of local residents.
2. To limit other commercial development to the maximum extent possible consistent with other objectives of the plan.
3. To group related facilities attractively for convenient use and to prevent continuous commercial development along arterials which would detract from the scenic character of the area.

2138 Principles

1. Convenience goods and services and limited shopping goods should be available in local shopping centers in sufficient quantity and variety to meet the most frequently recurring needs of the residents of the Town of Portola Valley and its spheres of influence.
2. The development of new commercial and office floor area should be controlled to avoid premature availability and should only be permitted when it is demonstrated that the proposed additional space and uses are needed, within the objectives of this plan, to serve the existing population or the population anticipated over a reasonable time period.
3. Local shopping and service centers should be centrally located with respect to the population served, have direct access from major streets, and have sufficient parking and service areas.
4. Individual sites should be landscaped attractively so as to integrate the entire development visually with the overall natural qualities of the planning area; buffer areas of adequate size should be provided adjacent to residential uses; residential areas should be protected from noise, unsightliness, odor and other nuisances.
5. Night lighting visible from the exterior of buildings should be strictly limited to that necessary for security, safety and identification; all night lighting including signs should be low intensity and shielded from view from residential areas.
6. (For principles relating to design objectives, building size and scale, conservation of natural beauty, and landscaping, see "General Principles" of the Land Use Element and "Principles" of the Open Space Element and "Principles" of the Nathhorst Triangle Area Plan.)

2139 Standards

1. In shopping and service areas, a small percent of the total net site area (exclusive of street and road rights-of-way) should be occupied by buildings. On any site, the ratio of the total floor space in buildings to the net site area should be limited. A substantial percent of the site area should be left as natural or developed as landscaped open space.

Description

- 2140 The major shopping, service and employment opportunities in nearby areas are recognized and hence a duplication is not proposed within the planning area. Thus, while frequently needed local shopping and service facilities are proposed within the area, activity centers outside the planning area such as the Stanford-Palo Alto shopping area are relied upon for more specialized goods and services.
- 2141 Four local shopping and service centers are indicated on the plan diagram. These centers are all existing at the present time and have sufficient area to meet the needs of local residents when the planning area is fully developed. The four centers are Ladera Country Shopper, Nathhorst Triangle Area, Village Square and Sharon Heights Shopping Center.
- 2142 The two centers within the Town, the Nathhorst Triangle Area and Village Square, should strictly adhere to the objective that these centers should provide only those goods and services necessary to satisfy the most frequently recurring needs of the service area -- residents of the Town and its spheres of influence. Thus, these centers are seen as including but not being limited to: hardwares, food service stores, drug stores, beauty parlors and similar convenience goods and very limited shopping goods. Limited office uses, such as doctors, banks and real estate offices serving the same population are also appropriate. Uses which would attract a majority of patronage from outside the service area should more appropriately be located in larger and more centrally located commercial and office centers elsewhere on the Midpeninsula or the Bay Area.
- 2143 It is recognized that the Sharon Heights Shopping Center and the Ladera Country Shopper and adjoining professional center do not completely meet the criteria for commercial uses described above. These centers, outside the Town and developed under other criteria, do however, provide largely convenience goods and services with limited shopping goods. The Ladera professional center also provides general office space not geared to serving local residents. Both of these centers are well-served by circulation and are accepted by this plan as appropriate for the locations involved. The undeveloped hillside behind the Ladera Country Shopper should be left as open space to balance the intensive development of the remainder of the site and provide a buffer between the shopping center and nearby residences.
- 2144 Existing research-administrative areas are recognized. The major use is the Stanford Linear Accelerator Center (SLAC). This facility will have a continuing major impact on the

planning area. Employment and access traffic to SLAC should be confined to Sand Hill Road. Attention should be given to assuring maximum compatibility of this installation with the surrounding area. Those aspects of the development continuing to require special attention include: power transmission to the accelerator, control of noise and exterior lighting, traffic, landscaping, and building design. It is likely that continuing attention to "temporary" installations will also be required. Existing development in Palo Alto of two research-office buildings on Arastradero Road is also recognized. Present controls over these areas should be maintained or strengthened.

- 2145 Additional areas are shown for research-administrative use north of the Junipero Serra Freeway as proposed on the Menlo Park General Plan. Uses in these areas should be of very low intensity in order to be compatible with uses in nearby residential areas. Sites used for research-administrative purposes should be primarily open, buildings should be low and perhaps in small clusters, and the site development and landscaping should be designed to blend the buildings into the natural landscape.
- 2145a Two areas for research-administrative use are shown along Arastradero Road in Palo Alto. These uses are inconsistent with Portola Valley's position as to appropriate uses in this area, but are recognized because of the substantial investment involved and the limited extent of the uses. No additional development of this intensity is shown on the Comprehensive Plan Diagram for this area because of the adverse impact such uses have on the surrounding area. In particular, the road system is not adequate to accommodate the heavy traffic characteristic of such uses and, in addition, such uses tend to attract additional high intensity uses which are not compatible with the low intensity residential character of Portola Valley.
- 2145b Nearby the the two areas for research-administrative uses along Arastradero Road uses is a headquarters for a tree maintenance service which serves the Midpeninsula Area. This use is relatively low intensity and is not shown separately on the Comprehensive Plan Diagram. The Town recommends that this use be kept within limits which are compatible with the low intensity character of the surrounding area.
- 2145c The "Lee" quarry on Los Trancos Road in Palo Alto is within the Town planning area. The quarry scar is visible from Portola Valley and truck traffic from the quarry passes through the Town. Efforts should be made to reduce the negative impacts of the quarry, including long-range restoration of the quarry to a more natural appearance.

INSTITUTIONS

2146 Objectives

1. To provide for those institutions that are for the use of local residents and in a character in harmony with the residential character of the Valley.
2. To ensure that existing institutions will be properly served by trafficways and are properly related to adjacent land uses.
3. To provide an appropriate area for the grouping of major community serving institutional facilities.

2147 Principles

1. All institutional uses should be served directly by major collector roads or roads with higher capacities.
2. All institutional uses should be of a scale, and general visual character and so sited to be compatible with the residential development in the planning area.
3. Space should be provided for all local institutional uses that may be necessary such as elementary and intermediate schools, churches, library and local governmental buildings.
4. Major community facilities should be located where convenient to the entire planning area.
5. Schools should make recreation areas and facilities available for use during non-school hours.
6. Schools should be located so as to minimize the time necessary to be spent in travel to and from school.
7. Schools should be located to provide safe and convenient access giving particular attention to the requirements of young children.
8. (For principles relating to building size and scale, and landscaping, see "General Principles" of the Land Use Element.)

2148 Standards

1. Residential type institutional facilities should be limited to a density of population no greater than that proposed for adjoining residential areas in the General Plan.

2. Public Schools:

<u>Grades</u>	<u>Maximum Desirable Travel Time</u>
K-5	20 minutes
K-6	20 minutes
6-8	30 minutes
High School	40 minutes

Description

- 2149 Institutions needed to serve all or parts of the planning area are proposed and are located so as to be convenient to their service areas. Institutional uses proposed include schools, churches and fire stations.
- 2150 Schools. With regard to public schools, the plan indicates two elementary schools and one intermediate school in the planning area.
- 2151 The Portola Valley Elementary School District serves the Town of Portola Valley plus some areas beyond the Town boundary. The Ormondale elementary school serves the entire Town of Portola Valley as does the Corte Madera intermediate school. Thus, most children in the Town have to travel considerable distances to school. As the population of the Town grows, there may be a need for additional school facilities. The school district owns a site on Nathhorst Avenue but there are no plans for constructing a school at this time. Buildings on the Nathhorst site are now used for school district offices. The changing age composition of the population, however, makes it very difficult to project the number of school age children accurately. It is recommended that population changes be watched closely and appropriate school facility decisions be made in advance of any deficiencies.
- 2152 The Las Lomitas Elementary School District serves Ladera and a considerable area to the north. The Ladera elementary school, well located to serve that local community, is integrated with the adjoining recreational facilities of the Ladera Recreational District. The school is currently leased to a private school. Should the use of the school change, any new use should be compatible with the surrounding residential uses.
- 2153 One private school is shown on the plan diagram, the existing Woodside Priory high school.
- 2154 Churches. Five churches are shown, three of which are in the Town. All are well served by major thoroughfares. Additional churches may be needed in the planning area in the future. Those areas indicated as "institutional" on the plan diagram provide suitable locations for additional churches.

- 2155 Fire Stations. Fire protection to the Town and most of the planning area is provided by the Woodside Fire Protection District. The District has constructed a new station on Portola Road near Alpine Road as shown on the general plan diagram. This station will provide primary service to the Town. The other District station is located to the north in the Town of Woodside. For further description of fire service and fire hazards, see the Seismic Safety/Safety Element.
- 2156 Other Institutional Uses. Other appropriate institutional uses that may be needed in the Town would include but not necessarily be limited to local governmental buildings. Each institutional use should be judged separately, and if compatible with other uses in the area could be located in one of the local shopping and service areas or in the vicinity thereof.
- 2156a The town center is proposed at the Portola Valley School site, now owned by the Town. The town center should contain the town hall, meeting rooms and indoor recreation facilities. Also, it is desirable that the town library be located at or in proximity to the town center. The site is within the San Andreas Rift Zone and occupancy of buildings may involve risk due to earthquake hazards, the acceptability of which must be evaluated. The outdoor recreation facilities at the site should be used and augmented as appropriate as a part of the town center (see Recreation Element for further description).
- 2157 An extensive area is shown as "low intensity academic reserve" for Stanford University. This area is presently being used for various radio telescopes, antennas, other experimental installations, and agriculture. Where it does not interfere with these primary uses, lands are also used for grazing. Much of this area is visible from the Portola Valley area. The retention of agricultural uses is encouraged. Any further developments in this area by Stanford University should be referred to the local governments in the nearby areas so that the effects on these areas can be properly evaluated and modifications recommended where necessary and desirable.
- 2158 Another area owned by Stanford University and shown as "low intensity academic reserve" is the area designated "Webb Ranch" on the Comprehensive Plan Diagram, Part 5. A portion of this area designated for agricultural use is described in the Open Space Element. A variety of uses would be appropriate on the balance of the Webb Ranch and therefore a detailed plan for this area is not appropriate at this time. Town guidelines for development are appropriate, however, and are as follows:
1. Lands within the area are appropriate for development of Stanford University's academic program and closely related land uses provided the intensity of development and use conforms with standards and criteria set forth in this plan. Opportunities exist for outdoor education including study of plant and animal life, geology and paleontology.

2. The retention of agricultural uses is encouraged. These activities allow use of the land while retaining the essential natural open space qualities of the area. The combining of agricultural uses with educational programs may be feasible. Agricultural uses would be appropriate on all lands shown as low intensity academic reserve, as an interim use on lands ultimately to be used for academic purposes, or as permanent open space.
3. Intensity of use should be compatible with present and planned use of adjoining and nearby lands when measured by such factors as vehicular traffic, ratios of building coverage and floor space in buildings to land area, building height, daytime and nighttime population density, artificial light, glare, noise, emission of smoke, smog, dust, odor, vibration and radiation or other deleterious factors. The volume of site traffic generated (people and vehicle) should not exceed the capacity of off-site transportation facilities to handle such traffic. The limited traffic capacity of the system is a major factor in determining the appropriate intensity of development within this area. Expansion of transportation facilities should be controlled to preclude esthetic or ecologic damage. Because of physical limitations, road access within the area can be developed at only two points on Alpine Road. In addition, in the freeway design and construction, provision has been made for only one road under the freeway interconnecting the Stanford lands to the north and south. Consideration should also be given to potential failure of Searsville Dam and consequent downstream flooding.
4. Development on the "low intensity academic reserve" areas should allow very substantial open space (all natural or replanted). Paved areas and building ground coverage shall not count as open space. Each developed area should emphasize uninterrupted open space. All development should be concealed from view, through location, from Freeway 280 and from Alpine Road as much as possible. The low intensity academic reserve designation is intended to help meet the objectives of Section 2158,3. and the Scenic Highways Element.

PORTOLA VALLEY CORRIDOR

2159 Objectives

1. To provide in two easily accessible locations for the clustering of those educational, civic, cultural, recreational and commercial facilities that serve the Town and its spheres of influence.

2. To preserve, enhance and reinforce the identity of the Town by providing for a unified design of the valley with the two clusters at the ends as focal points and linked by open space and planting epitomizing the natural quality of the Town.
3. To facilitate the safe movement of persons and vehicles through the valley floor and provide safe, convenient, and enjoyable access to and within the centers.

2160 Principles

1. The Portola Road corridor should be unified in design but susceptible to development over a period of time through the actions of individual property owners and local governmental agencies.
2. In order to promote safe, convenient, pleasant circulation within the Portola Road corridor, walks for pedestrians and trails for horseback riders should be separated to the greatest extent possible from channels of travel used by motor vehicles.
3. The Portola Road corridor should be developed so that the character of the existing orchards and open fields will be maintained.
4. (For principles relating to building size and scale, and landscpaing, see "General Principles" of the Land Use Element.)

Description

2161 The Portola Road corridor includes those lands lying adjacent to Portola Road from the northern Town limits to Alpine Road. The corridor includes a cluster of community serving uses at either end with open space, recreational, residential, and institutional uses in between. The cluster at the northern end includes churches, a commercial area and a community park. The cluster at the southern end includes a commercial area, space for institutional uses and a fire station. Uses between the clusters include a boarding stable, a proposed orchard preserve, some residences, The Sequoias and The Priory School. Portola Road is designated as a greenway. Special attention to design and development of the greenway will be needed to provide visual unity along the corridor. Overhead utility lines should be converted to underground installations. Much of the area between the two clusters is traversed by or near the San Andreas Fault and should therefore be kept in open space or low intensity uses. Particular attention should be given to the policies in the Seismic Safety/Safety Element when considering this area.

- 2162 The corridor should provide a place for the grouping of most commercial and institutional facilities appropriate to the Portola Valley area and serving all or a major portion of the planning area. The corridor is readily accessible by major local thoroughfares, trails and paths. Of critical importance will be the setbacks of buildings along roads, design and location of buildings, landscaping, and relationships between and among buildings. It is recommended that the entire area be given more detailed consideration and a specific plan and development controls prepared.

PUBLIC FACILITIES AND SERVICES

2163 Objectives

1. To ensure the development of public utilities in a manner that will cause minimum disruption of the natural beauty of the area.
2. To provide utilities adequate to serve local needs in the planning area.
3. To conserve natural resources and prevent pollution of water and air.

2164 Principles

1. All power transmission lines, power distribution lines, and telephone lines should be placed underground.
2. A program should be developed for progressively placing existing overhead lines underground.
3. All utility installations should be sited, designed, developed, and landscaped so as to blend with the natural scenery of the area.
4. All utility installations should be designed to minimize damage from identified geologic hazards.
5. Water, electric and gas supply lines should be loop systems where feasible.
6. Water supply systems must conform with established health and fire protection standards.
7. Waste water must not pollute ground water or streams or cause public or private nuisance.
8. Vegetative ground cover should be sustained to prevent storm water erosion. Unobstructed natural drainage

channels should remain the principal storm drainage system. Publicly owned drainage structures should be provided and maintained in accordance with the current Storm Drainage Plan of Portola Valley.

9. A solid waste management program which will assure adequate services, protect health, reduce waste generation, and conserve energy and resources without adversely affecting the environment should be supported. Wastes resulting from animal keeping should also be controlled and disposed of in a sanitary manner.
10. The planting of native vegetation in developments should be encouraged as a water conservation measure.
11. Utilities should first serve adjoining areas and then be incrementally extended to serve contiguous new development rather than be extended so as to allow development to "leap-frog" over intervening lands.
12. Whenever there is a known limited supply of a public facility or service which is beyond the control or ability of the Town to overcome, such limited facility or service shall be allocated approximately evenly over the time period of the anticipated shortage.

Description

- 2165 It is recognized that this General Plan shows areas for development which are not served by utilities or which have utilities inadequate to serve additional development. Such areas shall not be developed until all utilities are supplied.
- 2165a In the planning area, where the preservation of the natural scenery and environment is the one most important consideration by most residents, it appears appropriate to require that all public facilities not detract from the natural environment but to the maximum extent possible blend into the natural setting. In order to ensure that this is done, adequate review procedures should be established.

OPEN SPACE ELEMENT

INTRODUCTION

- 2200 The Open Space Element provides a framework for the preservation of open space within the planning area. Open space includes all open areas, large and small, public and private. The element, however, is concerned with those open space lands that are of major significance for public recreation and aesthetics, public health and safety, and protection of natural processes and which require special actions to ensure their preservation. The open space land uses proposed herein are primarily the macro- and intermediate- scale open spaces but this does not imply that the micro-scale is not important.
- 2201 The Open Space Element includes objectives, principles and a description. Appendix 1, Open Space Proposal Matrix indicates the responsiveness of the Portola Valley open space proposals to state law requirements, and provides an index of the relative scales of open space. Appendix 2, Open Space Element Work Program, provides steps for continued monitoring and evaluation to ensure the systematic preservation of the open space character of Portola Valley.
- 2202 A number of open space proposals have been given detailed consideration in other elements of the General Plan and will only be referenced here. The primary concern here is with open space proposals not described elsewhere in the plan and which are responsive to state legislative requirements for protection and preservation of natural processes and protection of the public health and safety.
- 2203 "Open space land" is any parcel or area of land or water which is essentially unimproved and devoted to an open space use which is designated on a local, regional or state open space plan as any of the following:1/
- 1) Open space for the preservation of natural resources including, but not limited to, areas required for the preservation of plant and animal life, including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, lakeshores, banks of rivers and streams, and watershed lands.
 - 2) Open space used for the managed production of resources, including but not limited to, forest lands, rangeland, agricultural lands and areas of economic importance for the production of food or fiber; areas required for recharge of

1/ Section 65560.d, Article 10.5, Title 5 of the California Government Code, as amended by adopted AB 966 (1972)

ground-water basins; marshes, rivers and streams which are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply.

- 3) Open space for outdoor recreation, including but not limited to, areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and areas which serve as links between major recreation and open space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors.
- 4) Open space for public health and safety, including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs and areas required for the protection and enhancement of air quality.

2204 Open space lands can be grouped under the following scales of open space:

- 1) Macro-Scale Open Space -- Lands where the sense of openness is extensive. Views of such space include large expanses of water, undeveloped or primarily undeveloped lands, or rural lands with minor development. Micro-environments may exist within such a space, such as a clearing in the woods, or a small wooded valley or cluster of trees in the otherwise grass covered rolling hills; but continuity and large size give macro-scale open spaces their dominant character.
- 2) Intermediate-Scale Open Space -- Lands of intermediate scale include areas generally ranging in size from 5 to 50 acres. The unifying element is the sense of openness in the middle ground with a definite background limit to one's view.
- 3) Micro-Scale Open Space -- Spaces that are of a small or intimate nature. Generally, the observer intimately confronts objects in this size open space and is relatively unaware of, or prevented from, viewing beyond two or three hundred feet at the most. His attention is usually focused on the detail of forms, textures and the color of foreground objects.

- 2205 Size is not a limiting factor for inclusion as open space, nor is public ownership necessary. In Portola Valley, concern for the preservation of open space should include all scales of open space from hillside watershed areas of large expanse to natural and landscaped areas on residential and other developed properties.
- 2206 Preservation for the public interest does not necessarily mean public access to open space lands. For example, public access might be incompatible with other open space uses, such as wildlife habitat, flood control, maintenance of the natural drainage system, or establishing or maintaining fragile plant growth. It might also be incompatible with individual property owner's rights to privacy.
- 2207 Many open spaces are best preserved and managed if the Town or another public agency has responsibility or regulatory authority through fee title, easement or special zoning. This is especially true of public parks, flood plains, natural areas along travel corridors, creeks and riparian lands, wilderness areas or other wildlife habitat of shy or endangered species, and areas that represent a potential danger to the health and safety of man. Implementation of the open space proposals is largely covered in the adopted Open Space Program, Town of Portola Valley, 1971.
- 2208 The major open spaces are shown on the Comprehensive Plan Diagram, Part 5.
- 2209 OBJECTIVES
1. To preserve open space in order to maintain the special residential qualities of Portola Valley.
 2. To provide for a continuous flow of open space throughout the entire planning area.
 3. To retain and enhance the important vistas, including the view of the skyline ridge as seen from below, and the view of the valley as seen from the hillsides.
 4. To protect and maintain those areas necessary to the integrity of the natural processes with special emphasis on but not limited to the water regimen.
 5. To provide for the retention of vegetative forms that contribute to the public safety, and help maintain the natural processes and aesthetic quality of the Town.
 6. To preserve as open space, insofar as necessary, those areas subject to inherent natural hazards in order to ensure the public safety and welfare.

7. To preserve and protect areas vital as wildlife habitat or of a fragile ecological nature.
8. To preserve those areas of cultural and historic significance to the Town, the Midpeninsula and the Bay region.
9. To provide open space to shape and guide development and to enhance community identity.
10. To preserve for agricultural purposes, those lands with high agricultural capabilities.

2210 PRINCIPLES

1. In any land development project, the basic visual character of the planning area should be conserved through regulation or through public acquisition of less than fee title.
2. All major visual features should be preserved through public acquisition of fee title or lesser interest.
3. Because the dominant features of the planning area are the natural land forms and vegetation, structures and land uses should be subordinated thereto. Only in the confines of individual sites should structures be allowed to be dominant.
4. Highways and other public works should incorporate beauty as well as utility, safety and economy.
5. The scale and type of materials used in developments should be harmonious with the surrounding natural scenery.
6. Open spaces should be linked together visually and physically to form a system of open spaces.
7. Small common open spaces intended to serve the immediate residents should be owned by the residents through a home owners' association, condominium or other similar legal instrument.
8. A variety of vistas should be provided and preserved ranging from the small enclosed private views to the more distant views shared by many people.
9. Open space along creeks and streams should be protected from encroachment through flood plain zoning, conservation easements, public acquisition of streamsid es and other appropriate devices which will help preserve them in an essentially natural state.

10. A qualified biologist should delineate those areas rich in wildlife, or of a fragile ecological nature. These areas should be preserved through land use regulation, or through dedication or acquisition where necessary.
11. Environmental impact studies should take into consideration the impact of development proposals on wildlife habitats.
12. Land use regulations should be used to prevent damage to vegetative ground cover in Portola Valley.
13. The contribution of vegetation and water areas in maintaining the air quality should not be overlooked in any major land use proposals.
14. Areas hazardous to the public safety and welfare should be retained as open space. Areas that fall into this category include:
 - a. Slopes generally over 30 percent.
 - b. Fault zones - bands on either side of known fault traces sufficient to include lands of probable ground rupture.
 - c. Areas of geologic instability.
 - d. Streams and their flood plains.

DESCRIPTION

- 2211 Extensive open land presently exists within Portola Valley, most of which is in private ownership. The open space proposals in this element define those lands that enhance the character of the Town. The primary open space function of these lands is for one or more of the following uses: preserving natural resources, managing production of resources, providing outdoor recreation, and protecting the public health and safety.
- 2212 The open space land use proposals that are of major importance in assuring a continued quality of open space and make up the open space classification system for Portola Valley are:
 1. Residential Open Space Preserves - (See "Residential Areas" in Land Use Element.)
 2. Wooded Conservation Areas - (See "Residential Areas" in Land Use Element.)
 3. Parkways - (See Recreation Element.)
 4. Greenways - (See Recreation Element.)

5. Open Space - Limited Development - These are areas which because of hazardous natural conditions, scenic beauty, limited access, remoteness, inadequate utilities or similar reasons are not appropriate for other than very limited development. These areas should be kept essentially in their natural state with only minimum disturbance by man. Four areas are shown in this category on the Comprehensive Plan Diagram, a portion of the Town's southern sphere of influence, land west of the Sklyline Parkway, and two areas in the hills of Palo Alto.
6. Open Space Preserves - Large undeveloped areas where the character and intended use of the land warrant retaining the land in a natural condition. A number of open space preserves are shown on the plan diagram. This plan recognizes that additional open space preserves may be established in areas that will help achieve the purposes of Section 2203 of this plan as well as be consistent with the balance of the plan.

The Jasper Ridge Biological Preserve includes Jasper Ridge, Searsville Lake and the marsh area at the south end of Searsville Lake. The Preserve is owned by Stanford University and is used by the university for biological studies. This is a unique resource in the planning area and should continue as a wildlife preserve and as a scenic location. It is also important as an entry to Portola Valley along Portola Road.

Several properties owned by the Midpeninsula Regional Open Space District are generally shown as open space preserves on the general plan diagram. These include:

Coal Creek Open Space Preserve
Los Trancos Open Space Preserve
Montebello Open Space Preserve
Russian Ridge Open Space Preserve
Windy Hill Open Space Preserve

These lands are to be kept primarily as undeveloped open areas while allowing low intensity recreation uses which do not conflict with the essential open space character. Impact on the Town from the use of these preserves should be minimal and most vehicular access should be from roads on or near the boundaries of the Town.

7. Agriculture - A substantial portion of the Stanford owned "Webb Ranch" is shown for agricultural use. This area lies predominantly between Ladera and the Junipero Serra Freeway. Most of the lands are currently used for cultivated agricultural use and boarding stables. The lands are basically on alluvial soils and well-suited to agriculture. In addition, most of the area is within the

flood plain of the Searsville Lake dam. This area should be retained primarily for agriculture with a limited amount of compatible recreational uses of low intensity such as the existing boarding stables.

8. Community Parks - (See Recreation Element.)
9. Community Preserves - (See Recreation Element.)
10. Neighborhood Park - (See Recreation Element.)
11. Neighborhood Preserves - (See Recreation Element.)
12. Trails and Paths - (See Trails and Paths Element.)

- 2213 Historic sites are areas and trails of historic significance and open space potential that may be lost if they are not protected from development. Such areas and trails are limited in quantity in the planning area, but should be preserved whenever possible.
- 2214 Areas of particular biotic importance should be kept in their natural state because they play a vital role in the natural processes, and are of importance for the welfare of man. These include wildlife, riparian, marshland, vegetative and biotic communities. The protection of these areas is achieved by the open space proposals previously listed which include the biotically important steep canyons, streams, forests, marshes and similar areas.
- 2215 Areas of importance for public health and safety purposes should by and large be kept in their natural state because they present potential hazards to man due to earth shaking, earth movement, fire, flooding, erosion and siltation. These areas are not shown separately on the Comprehensive Plan Diagram, but are included in the open space proposals previously listed in this element and are described in the Seismic Safety/Safety Element.

RECREATION ELEMENT

INTRODUCTION

2300 The Recreation Element provides guidelines for meeting the recreational needs of the Town. In the most comprehensive sense, recreation starts within the home and extends through community facilities and on to wider areas. This Recreation Element is concerned with lands within the Town that can provide recreation opportunities for use and enjoyment by Town residents.

2301 The recreation areas proposed are parks, parkways, greenways, and several categories of preserves. In addition, schools and the proposed library are referenced here because of their importance as facilities for recreation although they are already mentioned for their primary uses in other elements of the General Plan. Also included are trails and paths which are treated in more detail in the trails and paths element.

2302 Definitions

Community parks provide space for specialized activities which attract residents from the entire Town. The size of the park depends upon the activities to be accommodated and the desired character of the park. Small sites are appropriate in intensively developed areas, particularly where the park functions as a part of a larger complex of community serving recreation facilities. Appropriate facilities include such items as community buildings, swimming pools, and athletic fields.

Community preserves are scenic areas kept essentially in a natural state for the benefit of the residents of the Town. Such preserves provide visual pleasure and accommodate very limited access and use, such as trails and paths.

Other community designated areas include areas which have unique importance for community recreation, park or open space uses.

Neighborhood parks are local parks developed to meet the recreation needs of the local neighborhood.

Neighborhood preserves are local parks kept in their natural state, generally two to ten acres in size.

Parkways are broad linear bands of park-like areas in which a thoroughfare is located, in which recreational type uses are suitable and adjacent to which uses are of low intensity compatible with parkway character.

Greenways are corridors of beauty, natural or enhanced by landscaping, through which riding and hiking trails, cycling and walking paths, or roads pass linking portions of the planning area.

Regional parks or private regional facilities are scenic areas of sufficient size to serve at least the Midpeninsula Area and are served by major circulation facilities. They are also on or near the boundaries of the planning area and thus can be reached without the necessity of traveling through the Town of Portola Valley. These areas are important regional resources because of their intrinsic natural qualities.

2303 Those portions of the Recreation Element which can be represented graphically are shown on the Comprehensive Plan Diagram, Part 5. The recreation proposals shown on the diagram are general and are not meant to portray precise locations. They are intended, however, to provide a guide for future specific actions in carrying out the plan.

2304 OBJECTIVES

1. To provide appropriate park, recreation, and open space areas for community and neighborhood use in a manner designed to minimize the impact of excessive use upon the valley.
2. To retain for visual enjoyment the uninterrupted flow of contour and wooded outlines of the skyline ridge.
3. To protect and enhance more intimate views for the enjoyment of local residents.
4. To preserve and, where appropriate, develop streams and streamsides, unique resources in the area, in a manner that will assure maximum retention of their natural beauty and provide for their use and enjoyment by local residents.
5. To provide greenways along local corridors of movement.
6. To provide parkways along selected corridors of major movement.
7. To allow for regional use of scenic resources which are unique in the Midpeninsula Area and so located as to not conflict with the primary residential function of the Town.

2305 PRINCIPLES

1. Streams and streamsides should be preserved as scenic open spaces through regulation, dedication and, where necessary, acquisition by the Town.
2. Parks and preserves should be in locations designed to enhance the quality of living for local residents.
3. Public school recreation facilities should be available for neighborhood use. For those areas not conveniently served by a neighborhood school, separate neighborhood preserves for limited local use should be provided.

4. Community recreation needs should be met in park and recreation areas specifically adapted to local needs and interests.
5. Parkways should be developed so as to maximize scenic quality.
6. Parkways should be of a width suitable to preserve the natural quality of the area through which the parkway passes and provide space for appropriate uses within the parkway.
7. Parkways and greenways should be developed in a manner affording a natural environment for those using them.
8. Parkways and greenways should also be designed to insulate residential areas from noise and activity on trafficways and to provide buffers between other incompatible uses.
9. (For principles relating to building scale and size, and landscaping see General Principles for the Land Use Element.)
10. New residential subdivisions should provide for the clustering of residences so as to leave larger natural areas (residential open space preserves) undisturbed for visual enjoyment and limited local use. (See also Residential Areas, Land Use Element.)

2306 STANDARDS

1. All residential areas should be served by a public park within a distance of 1/4 to 1/2 mile.
2. The requirement of 1. above may be met by a neighborhood preserve, or a portion of a greenway, parkway or community preserve or park, or a combination of these.
3. The acreage in public parks (community parks, community preserves, neighborhood preserves, and portions of parkways or greenways) serving residential areas should be not less than five percent of the total acreage of the residential areas served. For example, a 400 acre residential development should be served by no less than 20 acres of public park of the classes enumerated above.

DESCRIPTION

- 2307 Extensive parks, preserves, recreation areas, and open spaces are proposed. Each proposal is based upon the natural resources of the planning area and related to the needs of residents. Specific recommendations are made for community parks, community preserves, neighborhood preserves, neighborhood parks, Alpine

Parkway, greenways, Skyline Parkway and regional parks and private regional facilities. Also, institutions, local shopping and service centers, trails and paths, and residential open space preserves and wooded conservation areas are referenced because of their role in meeting recreation needs of the Town.

- 2308 Major parks, recreation and open spaces for the planning area are shown on the Comprehensive Plan Diagram, Part 5.
- 2309 Each park or recreation area is so located that its normal use will not interfere with adjoining uses or disturb the tranquility of neighboring areas. Recreation areas and preserves within the Town are served by access routes designed to minimize infringement of privacy of Town residents.

Community Parks

- 2310 The Portola Valley School site, which is owned by the Town, is shown as a community park and the town center (see "Other Institutional Uses" in the Land Use Element). A variety of outdoor recreation uses exist and should continue, including tennis, playing fields, a little people's park and court games. The location and size of the site makes it appropriate for community use.
- 2311 The Triangle Green Park at the intersection of Alpine and Portola Roads serves the community as a gathering spot, a place to stop and rest and as a visual entrance feature to the Valley.
- 2311a Ford Park, across from Westridge Drive and within the Alpine Parkway, includes a little league baseball diamond, parking, trails and paths, and extensive natural areas for non-intensive recreation. The natural quality of much of this park is important in providing a natural setting when entering Portola Valley from the north.
- 2311b Rossotti Field, south of Arastradero Road and within the Alpine Parkway, is developed for soccer with ancillary parking. Planting and development should enhance the natural environment between Alpine Road and Los Trancos Creek.

Community Preserves

- 2312 Corte Madera Preserve proposed on a site west of the Willowbrook Subdivision, includes a beautiful stretch of Corte Madera Creek, adjacent oak covered slopes, and higher wooded knolls which open on to oak studded grassland. The site for this preserve is strategically located at the intersection of several main trails and paths where it could be an important destination for users of the trail and path system. The preserve should remain largely in its natural state. Besides use as a preserve, this land provides an important visual backdrop for the Willowbrook Subdivision.

- 2313 Meadow Preserve, proposed for the large field adjoining Portola Road and north of The Sequoias, lies astride the San Andreas Fault and is visually important to the entire quality of the valley. This preserve should be kept largely open, the existing character preserved, and present agricultural uses maintained.
- 2314 The Morshead Preserve should capitalize on the natural and man-made features of the property. It is shown by symbol on the plan diagram without specific recommendations with regard to size or shape of the preserve.
- 2314a The Windy Hill Preserve consists of a major portion of the eastern side of Windy Hill. Windy Hill, a visually dominant element for much of the Town and the South Bay Area, should be preserved as open space. The preserve would serve as an adjunct to the balance of Windy Hill which is shown as a part of the Skyline Parkway. It is also desirable that the natural character of the open ridge leading up to Windy Hill be preserved.

Neighborhood Preserves

- 2315 A number of neighborhood preserves are shown on the plan diagram. The specific sites for two of the preserves are defined through the general development plan for the Portola Valley Ranch "planned community" zoning. A third preserve is proposed for an area that includes two existing lakes at the edge of Los Trancos Woods. The exact location of the remaining preserves shown on the plan diagram for the as yet undeveloped lands of the Town's western hillsides should be determined by the Town when more precise plans are made for this area. The distribution indicated on the plan diagram generally provides a neighborhood park within a radius of from 1/4 to 1/2 miles of all potential residential sites. Steep grades and canyons have necessitated some modifications of required standards in a few instances. The preserves are intended to be largely natural.

Neighborhood Parks

- 2316 The existing Ladera neighborhood park, owned and operated by the Ladera Recreation District on land leased from Stanford University, functions jointly with the adjoining elementary school.

Alpine Parkway

- 2317 The Alpine Parkway includes Alpine Road and those portions of Los Trancos and San Francisquito creeks adjacent to the road. This Parkway is of a different scale than the Skyline Parkway and will be primarily for the use of the residents of the planning area. A variety of uses would be compatible within the parkway such as the existing tennis and swim clubs, and riding and hiking trails. (See the Alpine Parkway Sub-area Plan.)

Greenways

- 2318 A number of greenways are proposed in the plan along natural features such as canyons, streams and woods. Within these greenways can be located roads, trails and paths providing pleasant traveled ways.

Skyline Parkway

- 2319 The Skyline Parkway is the only major regional facility proposed within the Town. It would be comprised of a broad band of natural area and would require controls over adjacent lands to assure compatibility with the parkway. A variety of uses would be appropriate in the parkway including scenic lookouts, trails and paths, and special scenic and natural scientific attractions. In addition to its primary function it would provide some local recreation. (See also the Scenic Highways Element.)

Regional Parks and Private Regional Facilities

- 2320 Existing facilities serving largely the Midpeninsula Area include the Stanford Golf Course.
- 2321 The Palo Alto Foothill Park is presently reserved by the City of Palo Alto for the use of residents of the city only. For the Portola Valley area, however, the park provides an important open space.
- 2322 The existing Family Farm private club provides a regional resource for a relatively few people and infrequent use, but is an important open space.
- 2323 Not Used.

Institutions

- 2324 The elementary and intermediate schools in the Town are important recreation facilities and should be fully utilized in recreation programs. Similarly, the athletic facilities of the Priory school should be used by Town groups as much as might be permitted by the school without creating adverse impact on the surrounding residential areas. If additional elementary or intermediate schools are needed to serve the Town, they should be developed to serve community recreation needs and might include some features that could be jointly financed by the Town and school district.
- 2325 The existing three churches and any additional churches that might locate in the Town should be encouraged to make facilities available to community groups for meetings. It is assumed, however, that the major activities at the churches will continue to be for the members of the church.

- 2326 The proposed library will provide for recreational reading and could include space for small meetings and displays. The Town should carefully weigh the possibility of coordinating the need for such meetings including those of the Town Council, Planning Commission and other civic groups. Proximity to the town hall is also desirable.

Local Shopping and Service Centers

- 2327 The commercial centers provide some recreation potential. The uses in the centers and the designs should consider the possibility of providing acceptable recreation for youths. Shopping centers, if properly designed, can be attractive places for walking about and for special events of various sorts.

Trails and Paths

- 2328 The trails and paths are in themselves important recreation facilities. A very extensive system is proposed which provides access from residential areas to recreation facilities at schools, parks, etc., and between residential areas. The system provides pleasant routes for recreational travel through particularly scenic portions of the Town. (See Trails and Paths Element.)

Residential Open Space Preserves and Wooded Conservation Areas

- 2329 The residential open space preserves, while not acceptable for general Town-wide use, are important recreation assets since they provide undisturbed natural areas for visual enjoyment by all Town residents. In addition, some of the preserves will be accessible for use by local residents and some may accommodate public trails and paths. In wooded conservation areas tree cover is to be respected as development takes place in order to minimize the impact of development and retain opportunities for visual enjoyment. (See Land Use Element, Residential Areas.)

HOUSING ELEMENT

INTRODUCTION

2400 This Housing Element responds to the requirements of Government Code Section 65583. The sections of the element are in the same sequence as the requirements in the code, and code requirements are quoted at the beginning of each section. The element addresses the local share of regional housing needs as estimated by the Association of Bay Area Governments in the Housing Needs Report, December 1981, and Technical Memorandum #2, March 30, 1982. Data describing population, housing and household characteristics are from the 1960 U.S. Census, 1969 State Department of Finance Special Census for San Mateo County and the 1980 U.S. Census. Because of serious inaccuracies in the 1970 U.S. Census, data from this source are not used.

EXISTING AND PROJECTED HOUSING NEED

- 1) Analysis of population and employment trends and documentation of projections and a quantification of the locality's existing and projected housing needs for all income levels. Such existing and projected needs shall include the locality's share of the regional housing need in accordance with Section 65584. (Government Code)

Population Trends

2401 Portola Valley's population increased by 1,776 people from 1960 to 1980. Most of this increase occurred between 1960 and 1969. As shown in Table 1, only 90 people have been added since 1969 -- an increase of 2.3 percent.

Table 1

GROWTH IN POPULATION, 1960-1980

	<u>Total Population</u>	<u>Population in Group Quarters</u>	<u>Population in Households</u>	<u>% Increase Total Pop.</u>
1960 (a)	2,163	0	2,163	77.9
1969 (b)	3,849	305 (d)	3,544	2.3
1980 (c)	3,939	326 (e)	3,613	

(a) 1960 U.S. Census, Enumeration District data adjusted by William Spangle & Associates.

(b) 1969 State Dept. of Finance, Special Census, San Mateo County.

(c) 1980 U.S. Census, ABAG, Census '80 Data Profile, April 1982.

(d) 274 people in The Sequoias and 31 in other group quarters including The Priory.

(e) 311 people in The Sequoias and 15 in The Priory.

2402 The slow growth since 1969 can be attributed to a decrease in the number of children and a general aging of the population resulting in fewer persons per household. Table 2 shows the age distribution in 1969 and 1980. The number of people age 0-19 decreased by 400 from 1969 to 1980. The largest increase was the addition of 231 people 55 to 64 years old.

Table 2

AGE DISTRIBUTION 1969 AND 1980

Age Group	1969		1980		Change 1969-1980	
	#	%	#	%	#	%
0-4	188	4.9	138	3.5	- 50	-26.6
5-9	378	9.8	202	5.1	-176	-46.6
15-14	471	12.2	300	7.6	-171	-36.3
16-19	386	10.0	383	9.7	- 3	- 0.8
20-24	181	4.7	185	4.7	+ 4	+ 2.2
25-29	104	2.7	139	3.5	+ 35	+33.7
30-34	166	4.3	252	6.4	+ 86	+51.8
35-44	610	15.9	625	15.9	+ 15	+ 2.5
45-54	620	16.1	633	16.1	+ 13	+ 2.1
55-64	284	7.4	515	13.1	+231	+81.3
65-74	201	5.2	239	6.1	+ 38	+18.9
75-84	199	5.2	220	5.6	+ 21	+10.5
85 +	59	1.5	108	2.7	+ 49	+83.1
Total	3,847(a)	99.9	3,939	100.0	+ 92	+ 2.3
Under 18	1,332	34.4	905	23.0	-417	-31.5
18-21	185	4.8	207	5.3	+ 22	+11.9
65 & over	459	11.9	567	14.4	+108	+22.7

(a) Age unknown for 2 people.

Source: 1969 Special Census, 1980 U.S. Census

2403 Table 3 shows the percentage distribution by age groups in 1960, 1969 and 1980. A decline in percentage of the population under 5 and an increase in the percentage 45 years old and over are trends extending back to 1960.

Table 3

PERCENTAGE DISTRIBUTION BY AGE GROUPS 1960, 1969 AND 1980

<u>Age Group</u>	<u>1960(a)</u>	<u>1969</u>	<u>1980</u>
Under 5	11.3	4.9	3.5
5-19	29.2	32.0	22.4
20-29	7.8	7.4	8.2
30-44	27.6	20.2	22.3
45-64	17.4	23.5	29.2
65 +	6.7	11.9	14.4
<hr/>			
Total	100.0	99.9	100.0

(a) From Basic Data Report, Portola Valley Area, Table 2.
Includes approximately 400 people in Los Trancos Woods.

Employment Trends

2404 The most recent census data regarding employment are from the 1969 Special Census. Table 4 gives the percentage distribution of place of employment of principal wage earners at that time. Over 40 percent of the principal wage earners worked in Menlo Park and Palo Alto, the employment centers closest to Portola Valley. There is no reason to expect that the general distribution of employment location has changed significantly in the last decade.

Table 4

PLACE OF EMPLOYMENT OF PRINCIPAL WAGE EARNERS, 1969

	<u>% of Principal Wage Earners</u>
Portola Valley	6.8
Palo Alto & Menlo Park	41.8
Rest of Santa Clara Co.	16.7
Rest of San Mateo Co.	19.0
San Francisco	13.0
Elsewhere	<u>2.6</u>
	99.9%

Source: 1969 Special Census San Mateo County

2405 In August 1981, Portola Valley conducted a survey of all employers in the Town to determine the number and place of residence of employees working in the Town. The results of the survey are shown in Table 5. In addition to the 470 employees

Table 5

EMPLOYMENT & RESIDENCY
(Based on Survey, August 13-31, 1981)

<u>Type of Employment</u>	<u>Total Employees</u>	<u>Employees Who Reported Place of Residence</u>		
		<u>Number</u>	<u># Living in Portola Valley</u>	<u>% Living in Portola Valley</u>
Retail & Consumer Services	74	74	35	47
Office	128.5	127.5	29	23
Public	87	84	33	39
Private Institutional	180.5	70.5	27	38
Total	470	356	124	35%

(a) Survey included 60 employers. All except 4 small employers furnished data.

(b) Employee data are given in full-time equivalents.

reported in the survey, several residents conduct businesses from their homes. The Town has issued 11 business licenses for home occupations. Some businesses undoubtedly operate without a license. Assuming that there are 20 self-employed people working at home and 10 employees not reported in the survey, total employment in Portola Valley would be about 500. At a rate of one employee per household, Portola Valley would have 1,239 employed residents (U.S. Census, 1980). The jobs to employed resident ratio would be 1 to 2.5. Thus, Portola Valley provides significant numbers of housing units for employees who work elsewhere. This helps to relieve the jobs-housing imbalance that exists in nearby cities, such as Palo Alto, which have more jobs than employed residents.

2406 The survey indicates that more than a third of the jobs in Portola Valley, excluding home occupations, are filled by Town residents. This indicates that significant numbers of the employees can afford housing in the Town. Some of the non-resident employees may choose to live elsewhere for reasons other than inability to afford housing in the Town.

- 2407 Significant increases in employment in the Town are not anticipated. The Town is, and plans to remain, a residential community with non-residential uses restricted to those providing services primarily to Town residents. Of the approximately 18 acres of land zoned for commercial and office uses, only 25% is vacant.

Housing Trends

- 2408 Portola Valley is a community of detached single family houses on parcels ranging in size from 15,000 square feet to 2 1/2 acres or larger. Under conditions specified in the General Plan and land use regulations, the Town permits cluster development, guest houses on single family residential parcels, second units within single family residences and mobile homes. The location and density of housing development is controlled primarily by natural conditions, especially the San Andreas Fault, which crosses through the Town, and steep and potentially unstable slopes.
- 2409 Over the last 20 years, the housing supply has increased at a higher rate than population, resulting in a decline in average household size. As shown in Table 6, 653 housing units were added between 1960 and 1980, an increase of 103 percent. During

Table 6

INCREASE IN HOUSING UNITS, 1960-1980

	<u>Total Housing Units</u>	<u>Vacant Housing Units</u>	<u>Occupied Housing Units</u>	<u>% Increase Total Housing Units</u>	<u>Population in Households</u>	<u>Persons Per Household</u>
1960 (a)	631	40 (e)	591		2163	3.66
				65.8		
1969 (b)	1046 (d)	33	1013		3544	3.50
				22.8		
1980 (c)	1284	45 (f)	1239		3613	2.92

(a) 1960 U.S. Census, Enumeration District data adjusted by William Spangle and Associates.

(b) 1969 State Dept. of Finance, Special Census, San Mateo County.

(c) 1980 U.S. Census, ABAG, Census '80 Data Profile, April 1982.

(d) Census count of 1,292 units minus 246 units at The Sequoias.

(e) Estimated using 1960 vacancy rate for Census Tract 95 of 6.4%.

(f) Includes 44 vacant units and 1 seasonal unit.

this same period, population increased by 82 percent. From 1969 to 1980, the number of housing units increased by 22.8 percent while population increased by only 2.3 percent. The average number of persons per household dropped from 3.66 in 1960 to 2.92 in 1980.

- 2410 From 1969 to 1980, net additions to the housing stock averaged 22 units per year. Records show that 729 building permits were issued for new residential construction between 1960 and 1980 -- these permits would result in 76 units more than indicated by the Census data. The difference probably reflects the fact that not all building permits have been used and that, over the 20 years, some units were demolished. According to the building permit records, new housing construction averaged 28 units per year between 1969 and 1980.

Housing Need

- 2411 On March 24, 1982, the Town Council adopted Resolution 964-1982 accepting with qualifications the determination of housing need in Portola Valley contained in ABAG's Housing Needs Report, December 1981. The report estimates that Portola Valley will need 88 housing units between 1980 and 1985 to meet its share of regional housing need. The resolution accepted this figure as a basis for general planning while explicitly not accepting the input data or methodology used by AGAB to arrive at this figure.
- 2412 Similarly on July 14, 1982, the Town Council adopted Resolution 988-1982 accepting, for purposes of revising the Housing Element, the income distribution prepared by ABAG and presented in Technical Memorandum #2 dated March 30, 1982. As in the previous resolution, the input data and methodology used by ABAG are not accepted. The distribution is accepted only as a basis for revising the Housing Element.
- 2413 The income distribution, as set forth in Technical Memorandum #2, is based on a 1980 median household income for Portola Valley of \$31,864. Using this median, the income categories and housing need by category are shown in Table 7.

Table 7

INCOME CATEGORIES AND DISTRIBUTION OF HOUSING NEED, 1980

<u>Income Category</u>		<u>Maximum Household Income</u>	<u>% of Units</u>	<u># of Units</u>
Above Moderate	(over 120% of median)	over \$38,237	72	63
Moderate	(81% to 120% of median)	\$38,237	9	8
Low	(51% to 80% of median)	\$25,491	2	2
Very Low	(50% or less of median)	\$15,932	17	15
Total			100%	88

- 2414 According to the Housing Element Guidelines (Section 6438), "affordable" housing costs no more than 25 percent of gross monthly income. Using this rule-of-thumb, the ABAG 1980 income distribution implies the provision of housing at the monthly costs shown in Table 8.

Table 8

AFFORDABLE MONTHLY HOUSING COST BY INCOME CATEGORY, 1980

	<u>Maximum Annual Income</u>	<u>Maximum Monthly Income</u>	<u>Maximum Affordable Rent or House Payment</u>
Moderate	\$38,237	\$3,186	\$797
Low	\$25,491	\$2,124	\$531
Very Low	\$15,932	\$1,328	\$332

Housing Availability

- 2415 The 1980 Census reports that Portola Valley had a total of 1,239 occupied housing units (Table 6). Of these 1,142 were owner-occupied and 97 were renter-occupied. Table 9 shows the distribution of the renter-occupied units by monthly rent.

Table 9

DISTRIBUTION OF OCCUPIED HOUSING UNITS
BY MONTHLY CONTRACT RENT(a) 1980

<u>Rent</u>	<u># of Units</u>	<u>Percent</u>
Less than \$100	2	2.1
\$100 to \$199	5	5.2
\$200 to \$299	7	7.2
\$300 to \$399	16	16.5
\$400 to \$499	9	9.3
\$500 and over	32	33.0
No Cash Rent	<u>26</u>	<u>26.8</u>
Total	97	100.1

- (a) Rent was not reported for 11 renter-occupied units in the 1980 Census. These units have been distributed among the rent categories in the same percentage as the units for which rent was reported. Because of rounding to whole units, the percentage distribution shown varies slightly from that for the 86 units for which rent was reported.

Source: 1980 Census

2416 For owner-occupied housing, the census reports only an estimated house value. The actual monthly costs of owner-occupied housing are highly variable, depending on the age, size and terms of the existing mortgage(s). One way to estimate the monthly cost of owner-occupied housing is to pick a point in time and look at the relationship between house value and housing costs based on typical financing terms at that time. Table 10 gives estimates for 1980 of the monthly cost for principal, interest, insurance and taxes for a house in each of the value categories. The estimates assume a 30 year mortgage for 80 percent of the house value at an interest rate of 14 percent. The 30 year mortgage was still a common financing mechanism in 1980. Interest rates on first mortgages during the year fluctuated between 12 percent and almost 18 percent with an average of about 14 percent. Under the specified financing terms, the monthly payment in 1980 was approximately 0.1 percent of the house value. Table 10 shows the relationship between housing value and monthly cost and the distribution of owner-occupied units in 1980.

Table 10

DISTRIBUTION OF OWNER-OCCUPIED HOUSING UNITS
BY HOUSE VALUE AND ESTIMATED MONTHLY COST, 1980

<u>House Value</u>	<u>Monthly Cost</u>	<u># of Units</u>	<u>Percent</u>
Less than \$25,000	Less than \$250	2	.2
\$25,000 - \$34,999	\$250 - \$349	1	.1
\$35,000 - \$49,999	\$350 - \$499	1	.1
\$50,000 - \$79,999	\$500 - \$799	11	1.0
\$80,000 - \$99,999	\$800 - \$999	14	1.2
\$100,000 - \$149,999	\$1,000-\$1,499	54	4.7
\$150,000 - \$199,999	\$1,500-\$1,999	89	7.8
\$200,000 and more	\$2,000 and up	970	84.9
Total		1,142	100.0

(a) Estimated at 0.1% of house value based on typical financing terms in 1980.

(b) Value was not reported for 133 owner-occupied units in the 1980 Census. These units have been distributed among the value categories in the same percentage as the units for which value was reported.

Source: 1980 U.S. Census

2417 The estimated monthly cost overstates the actual costs paid by Portola Valley homeowners in 1980 because many purchased their homes when values and financing costs were much lower. However, the distribution reflects fairly accurately the costs to new purchasers in 1980 and provides a reasonable basis for assessing affordability at that point in time.

2418 Table 11 summarizes the availability of affordable housing in Portola Valley as of 1980, showing the number of housing units available in each income range as defined by ABAG. As shown in Table 11, 96 rental and owner-occupied units, or 7.7 percent of the occupied housing units in Portola Valley, were affordable to households with moderate, low and very low incomes in 1980. These units have been provided through the private market without direct public intervention.

Table 11

AFFORDABLE HOUSING BY INCOME CATEGORY, 1980

<u>Affordable Monthly Cost(a)</u>	<u>Income Category</u>	<u># Of Rental Units(b)</u>	<u># of Owner Occupied Units(e)</u>	<u>Total Units</u>	<u>% of All Occupied Units</u>
Less than \$350	Very Low	48 (c)	3	51	4.1
\$350 - \$499	Low	17	1	18	1.4
\$500 - \$799	Moderate	16 (d)	11	27	2.2
\$800 - Plus	Above Moderate	16	1,127	1,143	92.3
		97	1,142	1,239	100.0%

(a) From Table 8, ranges adjusted to permit direct comparison with 1980 Census data on rent and house values.

(b) From Table 9.

(c) Includes units in Table 9 with rent up to \$299, half of those between \$300 and \$399, and those leased for "no cash rent".

(d) Includes one half of units shown in Table 9 with rents of \$500 and over.

(e) From Table 10.

Projected Housing Availability

2419 Based on past building rates in the Town, it is likely that 88 new housing units will be constructed between 1980 and 1985 without direct public intervention. The only major impediment to achieving this goal, set by ABAG, is the current slowdown in housing production nationwide which appears to be caused primarily by high interest rates.

2420 It will be more difficult for the Town to meet the ABAG goal of providing 25 units of housing affordable to moderate, low and very low income households between 1980 and 1985. In 1980, 81 of the 96 affordable housing units were renter-occupied. Most of these rental units were probably separate living quarters within single family houses and detached guest houses. In early

1979, the Town amended its zoning ordinance to allow, as a conditional use, guest houses with kitchen facilities on parcels of two acres or more. Since that time, eleven conditional use permits have been issued for guest houses with kitchens. Assuming these units are affordable to moderate, low or very low income households, the Town is currently providing 3 or 4 units of affordable housing a year and this is occurring at a time of an extremely low rate of new housing production in the region. By continuing to permit such units, Portola Valley may come reasonably close to ABAG's target of 25 affordable units by 1985.

HOUSEHOLD CHARACTERISTICS

(2) Analysis and documentation of household characteristics, including level of payment compared to ability to pay, housing characteristics, including overcrowding, and housing stock condition. (Government Code)

Household Composition

- 2421 In 1980, Portola Valley had 1,239 households with an average of 2.92 persons per household. Rental households were smaller, on the average, than owner households. In 1980, 245 people lived in 97 rental households for an average of 2.53 persons per household. The 1,142 owner-occupied units contained 3,368 people for an average household size of 2.95. Persons per household of renter-and owner-occupied units are detailed in Table 12.

Table 12

PERSONS PER HOUSEHOLDS BY TENURE

Persons Per Household	Owner-Occupied		Renter-Occupied	
	# of Units	%	# of Units	%
1	102	8.9	29	29.9
2	420	36.7	31	32.0
3	239	20.9	14	14.4
4	243	21.3	15	15.5
5	102	8.9	2	2.1
6 +	36	3.2	6	6.2
Total	1,142	99.9%	97	100.1%

Source: 1980 U.S. Census

- 2422 Over 60 percent of the rental units were occupied by 1 and 2 person households. The rental units were also smaller than owner-occupied units with an average of 4.9 rooms per unit compared with 7.6 rooms for owner-occupied units (1980 U.S. Census).

- 2423 There is no multiple family housing in Portola Valley. Thus, it is likely that the rental units are primarily quarters within single family houses and guest houses built as accessory structures on single family residential parcels. According to the 1980 Census, 74 housing units were at addresses with more than one housing unit. Most of these units are probably guest houses which are rented or otherwise made available to employees or relatives.
- 2424 As a community of single family homes, Portola Valley is comprised mostly of traditional family households. As shown in Table 13, 3,305 people lived in family households. These people were classified as householder, spouse, other relatives or non-relatives. There were 1,261 "other relatives" in family households -- 30 were 65 years old or over and 896 were under 18 years old. This leaves 335 relatives between the ages of 18 and 64. It might be expected that most of the relatives between 18 and 64 were young adults who had not yet left home to go to college or form their own household. However, in 1980 there were only 207 people age 18 through 21 in the whole Town. Clearly, at least 128 of the other relatives in family households were over 21 years old. One explanation for the unusually large number of family members over 21 years old is that post-college age young people, finding it economically difficult to set up their own households, are still living with their parents.
- 2425 Table 13 also shows that 63 non-relatives lived in family households in 1980. As defined by the census, non-relatives are roomers, boarders, paid employees, roommates, partners and foster children. It is likely that many of the non-relatives are employees who receive living quarters as part of their compensation for services performed for the owners. It appears that numerous families in Portola Valley are providing housing for adult family members and non-relatives who otherwise would be seeking affordable housing in the area.

Table 13

HOUSEHOLD COMPOSITION, 1980

	Total	Persons in Household		
		Under 18	18-64	65 and over
<u>Family Households (1,036)</u>				
Householder	1,036	0	925	111
Spouse	945	0	871	74
Other Relatives	1,261	896	335	30
Non Relatives	63	3	60	0
Subtotal	3,305	899	2,191	215
<u>Non-Family Households (72) with 2 or More Persons</u>				
Male Householder	55	0	53	2
Female Householder	17	0	13	4
Non Relatives	105	6	98	1
Subtotal	177	6	164	7
<u>Non-Family Households (131) with 1 person</u>				
Male Householder	70	0	59	11 (a)
Female Householder	61	0	39	22
Subtotal	131	0	98	33
<u>Group Quarters</u>	326	0	14	312
Total	3,939	905	2,467	567

(a) The ratio of female to male householder 65 and over is assumed to be 2 to 1, the same as for householders 65 and over in non-family households with 2 or more persons.

Source: 1980 U.S. Census

2426 Non-family households are defined as a person living alone or only with persons unrelated to him or her. In 1980, Portola Valley had 203 such households. Seventy-two households with 2 or more persons contained 177 people for an average household size of 2.5. The other 131 non-family households were one person households. Most of the occupants were between 18 and 64 years old. Non-family households are, in part, a response to the high cost of housing. They consist primarily of adults sharing living quarters and, presumably, housing costs.

Utilization of the Housing Stock

- 2427 The U.S. Census defines overcrowding as 1.01 or more persons per room occupying a housing unit. Portola Valley has a few overcrowded housing units. The 1980 Census reports that 55 people live in 10 housing units with 1.01 or more persons per room. Seventeen of the people are in 2 rental units.
- 2428 Most houses in Portola Valley are large. In 1969, about three-fourths of the housing units had 3 or more bedrooms. The 1980 Census reports that 80 percent of the housing units had 6 or more rooms ("rooms" do not include bathrooms, storage areas or areas separated by less than a floor to ceiling partition). The housing space is being occupied by fewer and fewer people. As shown previously in Table 6, persons per household in Portola Valley decreased from 3.66 in 1960 to 2.92 in 1980. If occupancy in 1980 had been at the 1960 rate, occupied housing units would have accommodated an additional 922 people. This underutilized space may be tapped in the future, in part through making living space available to unrelated persons.

Housing Condition

- 2429 In 1980, Portola Valley had 1,283 year-round housing units of which 4 lacked complete plumbing facilities for the exclusive use of the household. Only two of these units were occupied and none occupied by renters. Most of the housing in Portola Valley is relatively new. Town records indicate that 729 building permits for new residential construction were issued from 1960 through 1980. Thus, of the total of 1,284 housing units in Portola Valley in 1980, approximately 55 percent were 20 years old or less.
- 2430 The building permit records also give some indication of the level of private maintenance and improvement of residential properties in the Town. In the eleven years from July 1969 through June 1980, 341 permits were issued for additions and 277 for remodeling. In fiscal year 1979-80, 41 building permits valued at \$786,322 were issued for additions and 71 valued at \$665,371 were issued for remodeling. Private expenditure on housing improvements exceeded \$1,400,000 during the year.

LAND SUITABLE FOR RESIDENTIAL DEVELOPMENT

- (3) An inventory of land suitable for residential development including vacant sites and sites having potential for redevelopment, and an analysis of the relationship of zoning and public facilities and services to these sites. (Government Code)
- 2431 The planning area of the Town has twelve residential areas as shown on the Residential Areas map included in Section 2100 and described in Sections 2122-2129a of the General Plan. Nine of these areas are within the Town limits; the rest are unincorporated. Basic information pertaining to the development potential of the Town's nine residential areas is summarized in Table 14.

Table 14

HOLDING CAPACITY BY RESIDENTIAL AREA, 1980

Residential Area	Residential Intensity General Plan	Residential Zoning Minimum Lot Size	General Plan Holding Capacity H.U.	Housing Units 1980(a)	Remaining Holding Capacity 1980	Nature of Development Potential
1. Brookside	low-medium	R-1/15M (15,000 sq.ft.)	194	173	21	scattered vacant lots, potential lot splits
2. Woodside Highlands	low-medium	R-1/20M (20,000 sq.ft.) R-1/1A (1 ac.)	154	115	39	scattered vacant lots, potential lot splits
3. Portola Redwoods	low-medium	R-1/20M (20,000 sq. ft.)	35	30	5	scattered vacant lots, potential lot splits
6. Willowbrook	low	R-E/1A (1 ac.)	61	48	13	scattered vacant lots, potential lot splits
7. Arrowhead Meadows-Alpine Hills, etc.	low	R-E/1A (1 ac.) R-E/1A/SD-1a (1 ac.)	558	470	88	scattered vacant lots, lot splits, 9 parcels with potential for 34 additional lots
8. Westridge	conservation resid.	R-E/3.5A/SD-2/D-R (2 ac.) R-E/2A (2 ac.) R-E/2.5A (2.5 ac.)	295	251	44	scattered vacant lots, lot splits, one 75 ac. parcel with holding capacity of 20 units
9. Portola Valley Ranch	conservation resid.	PC/2A/SD-1 (2 ac.) R-E/3.5A/SD-2/D-R (2 ac.)	272	108	164	unfinished portions of P.V. Ranch PC, 3 properties (225 ac.- 45 unit holding capacity)
11. Lower Western Hills	conservation resid.	R1-E/3.5A/SD-2/D-R (2 ac.)	124	22	102	5 major properties (653 ac. - 101 unit holding capacity)
12. Upper Western Hills	open residential	M-R/7.5A/SD-3/D-R (3 ac.)	104	13	91	7 major properties (1643 ac. - 97 unit holding capacity)
TOTALS				1,797	1,230(b)	567

(a) Inventory by William Spangle and Associates, Inc., 1980

(b) This figure is 54 less than the 1980 Census count. The difference is probably second units on individual parcels which were counted by the Census but not included in the inventory. This would not significantly affect the remaining holding capacity.

- 2432 In general, residential areas 1, 2, 3, 6, 7 and 8 have minimum lot size requirements ranging from 15,000 square foot to over 2-1/2 acres. Additional development will occur primarily as infilling on scattered vacant lots. The road system, utility lines and public services and facilities have been designed to accommodate the presently planned intensity of use. Increased intensity would strain the services capacity and be incompatible with the character of the existing development.
- 2433 Residential area 7 contains several parcels which could be subdivided to create 3 or more lots. Approximately 34 new lots could be created on nine different parcels. Some of the parcels are presently without access, on substandard roads and/or lacking utility extensions. All are adjacent to neighborhoods with an established density of at least one acre per housing unit. Compared to other areas of the Town, geologic and slope constraints are less severe in this area.
- 2434 The only large unsubdivided parcel in residential area 8 is a 75 acre parcel called the Stanford Wedge. This parcel is very steep, with slopes of 30 to 50 percent and difficult problems of access. The holding capacity of is 20 units; however, because of the costly development problems that would have to be overcome to build on the site, it is not a feasible location for construction of affordable housing.
- 2435 The large vacant parcels lie in residential areas 9, 11 and 12 where slopes are steep and development potential is constrained by severe geologic hazards. Major vacant parcels in the three areas have a combined holding capacity of 243 units. The holding capacities have been determined by study of the physical conditions of each property and applying the Town's standards regarding slope and geologic stability. Problems in providing access, public services and utilities further constrain development either by rendering it infeasible or adding significantly to the cost. In most cases, development will occur on the more stable portions of the properties, probably in clusters, with major portions of the land left in permanent open space. The combination of natural and service constraints will dictate not only the intensity of development, but, to some extent, the costs. It is unlikely that new housing in this area can be constructed at a price affordable to moderate or lower income households.

GOVERNMENTAL CONSTRAINTS ON HOUSING

(4) Analysis of potential and actual governmental constraints upon the maintenance, improvement, or development of housing for all income levels, including land use, controls, building codes and their enforcement, site improvements, fees and other exactions required of developers, and local processing and permit procedures. (Government Code)

- 2436 The development policies, land use and building regulations and permit processing procedures applied by the Town have evolved over the years in direct response to problems inherent to the Town's location and natural environment. Taken together, the governmental constraints probably preclude provision of significant numbers of housing units affordable to moderate or lower income households as part of large new residential developments. No multiple family residential projects are permitted in the Town under current policies and regulations. The low density character of residential development in the Town is dictated by topography and geologic constraints, limitations of public services, and regional and county planning policies.

Policies re Geology and Slope

- 2437 Portola Valley is in the forefront of California cities in developing plans and regulations which respond to a geologically hazardous environment. In 1973, the Town adopted setback requirements along the San Andreas Fault which runs through the Town. In establishing the setbacks, the Town relied on fault mapping done for the Town in 1970 at a scale of 1" = 500'. The ordinance prohibits structures for human occupancy within 50 feet of a "known" fault trace and within 100 feet of an "inferred" fault trace. A property owner may undertake a detailed geologic study to locate an "inferred" trace more precisely. In such cases, the trace would be reclassified as "known" and the setback requirement reduced to 50 feet.
- 2438 Landslide incidents in 1969 spurred the Town to contract for detailed geologic mapping. Local geology was mapped at a scale of 1 inch = 500 feet. The map was used as a basis for preparing a Land Movement Potential map, also at a scale of 1 inch = 500 feet. With the help of geologists, engineering geologists, a soils engineer, attorney and planner, the Town developed criteria relating land uses to the stability categories on the Land Movement Potential map. The type and intensity of development and project review procedures and requirements in the Town are directly related to this detailed geologic information. It is noteworthy that little damage from sliding occurred in Portola Valley in the heavy rains of the winter of 1980-82, in spite of its precarious geologic environment.
- 2439 Residential areas 11 and 12, which contain most of the undeveloped land in the Town, are very steep, with approximately 70% of the land in excess of 30% slope and 25% in excess of 50% slope. The intensity of development in the Town is in part related to steepness of slope. Slope density provisions govern the density of housing development in parts of residential area 8 and in all of residential areas 9, 11 and 12. These provisions encourage concentration of development on the flatter portions of the large holdings in these areas. The provisions lead to safer, more easily accessible and more efficiently served development than might occur otherwise.

Public Service Constraints

- 2440 The level of public services provided by the Town is geared to a small, dispersed population and would be inadequate for denser development. Many of the roads are narrow and winding with restricted capacity. Limited bus service is provided by Samtrans along Portola and Alpine Roads and in the Westridge area. Only a portion of the Town is served by sanitary sewers and the number of new hook-ups is limited by the West Bay Sanitary District as part of a district-wide allocation system. On-site disposal systems are used in much of the Town. In many areas, successful disposal requires large sites because of adverse soils and drainage conditions.
- 2441 Many local public services are provided by special districts or the County under contract. Woodside Fire Protection District provides fire protection services. Police services are provided by the Woodside Patrol and County Sheriff. Building inspection and engineering services are provided by the County. The Town has limited control over the quality or quantity of these services.

Regional and County Planning Policies

- 2442 The Town's low density development is consistent with policies of the Association of Bay Area Governments fostering a "city-centered" pattern of urban development with emphasis on in-filling. ABAG's Regional Plan 1980 contains this statement with regard to the San Francisco/Bayside San Mateo County Sub-Regional Planning Area:

"Throughout this planning area there are relatively limited opportunities to support added population growth. Most vacant residential land is located in hillside areas which lack urban services and where environmental conditions may preclude all but very low density and high cost units."
(p. Sub-area 1-2)

- 2443 Portola Valley's low density character is also consistent with the San Mateo County Master Plan. This plan contains the following principles for residential communities:

"Assignment of population density patterns should be guided by consideration of topography, vegetative cover, access to transportation facilities, and other factors as follows:

- a. The highest population densities should occur in relatively level areas close to major centers of commerce and industry where coordinated development is possible and where transportation and other necessary public facilities can readily be provided.
- b. Population density should decrease as the distance from district centers, industrial areas, and employment centers increases.

- c. Population density should decrease as distance from local service facilities increase.
- d. Population density should decrease as steepness of terrain increases.
- e. The lowest densities and largest lots should occur on steep hillsides or in mountainous areas where it is necessary to limit storm runoff, prevent erosion, preserve existing vegetation, protect watersheds, and maintain the scenic quality of the terrain."

Fees for Processing Applications for Housing Development

- 2444 The low density zoning of the Town, which is a response largely to physical constraints, directly affects the cost of housing. However, safe development at any density would probably result in housing unit costs exceeding those affordable by moderate and lower income households (see following section on non-governmental constraints). The Town has little direct control over the major components of housing cost. The fees required for processing applications are a minor part of the cost of housing. The Town sets these fees to cover costs of processing. In January 1982, ABAG issued a report, Development Fees in the San Francisco Bay Area, An Update, which shows that development fees in Portola Valley for a single family home were \$420 -- the lowest of all the Bay Area cities.

NON-GOVERNMENTAL CONSTRAINTS ON HOUSING

(5) Analysis of potential and actual non-governmental constraints upon the maintenance, improvement, or development of housing for all income levels, including the availability of financing, the price of land, and the cost of construction. (Government Code)

- 2445 Non-governmental constraints severely limit provision of housing for low and moderate income groups.

Housing Market

- 2446 The current price of housing, land costs, construction costs and financing costs are all high. Single family dwellings in the Town currently sell from a low of \$200,000 to well over \$1,000,000.
- 2447 The July 14, 1982 Country Almanac listed 11 homes in Portola Valley for sale between \$239,000 and \$750,000 with an average asking price of \$511,000. Interest rates for a 30 year first mortgage are averaging about 16 percent. Monthly mortgage payments for an 80 percent loan on a \$500,000 house would be

about \$6,000. Even assuming a \$200,000 house with only a \$100,000 mortgage, the monthly payment at 16 percent would be over \$1,300 -- well above the top of the affordability range for moderate income households (\$800 per month as determined by ABAG).

2448 The costs to build housing are also very high. A buildable one acre site costs a minimum of \$300,000. Construction costs for single family houses average about \$90 per square foot. Thus, a 2,500 square foot house on a one acre lot would cost \$525,000 exclusive of any financing costs. These costs are so high that even if the Town were to permit higher density development, the cost of the units would still be beyond the reach of moderate income households. For example, assume a developer purchased an acre parcel for \$300,000 and successfully obtained a rezoning to permit construction of 20 condominiums - each with 1,500 square feet of space. Total cost for just land and construction at \$70 per square foot would be \$2,400,000; cost per unit would be \$120,000. As noted above, payments for a 30 year mortgage of \$100,000 at 16 percent are about \$1,300 per month -- still not affordable to moderate income households. In this case, the land value is based on zoning for one single family home. It would be much higher if the land were rezoned for multiple family use prior to purchase for a housing development.

2449 The point is that, although the low density zoning in the Town adds to the cost of housing, market factors are of overriding importance. Even with a large increase in density, affordable housing (as defined by ABAG and HCD) is unlikely to result. Thus, Portola Valley must look to other means to provide its share of the regional need for affordable housing. As described in this element, the Town will continue to permit residents to provide separate living units in single family houses and build guest houses on single family parcels under conditions set forth in this plan and the Town ordinances.

Fiscal Constraints

2450 The Town government operates on a minimal budget, relying heavily on volunteer efforts for many public functions. Since Proposition 13, the Town's overall budget has decreased in spite of continuing inflation in costs. The Town's ability to undertake major programs to provide or rehabilitate housing is severely constrained by fiscal realities.

2451 The magnitude of the needed public subsidy to bring housing costs in the Town within the affordable range far exceeds the Town's resources. For a moderate income family to purchase the average \$500,000 home with payments of \$6,000 per month would require a subsidy of at least \$5,000 per month or \$60,000 per year. The least expensive home currently on the market in the

Town is listed at \$239,000. Payments with a 20 percent down payment would be over \$2,000 per month. A subsidy of at least \$1,200 per month or \$14,000 per year would be needed for a moderate income household to be able to purchase this home.

- 2452 The Town's proposed 1982-83 budget projects total expenditures of \$649,180 -- \$546,080 for operating expenses, \$50,000 for interest and \$53,100 for capital improvements. The entire capital improvement budget would be insufficient to subsidize one housing unit at current average market prices.

SPECIAL HOUSING NEEDS

(6) Analysis of any special housing needs, such as those of the handicapped, elderly, large families, farmworkers, and families with female heads of households. (Government Code)

Handicapped

- 2453 There are no data to show how many handicapped people live in Portola Valley. The State Department of Rehabilitation estimates that 8,000 people with visual and hearing handicaps and 40,000 with physical handicaps live in San Mateo County (Department of Rehabilitation, survey of the Disabled in San Mateo County, 1979). Assuming the distribution of the disabled is the same as that of total population in the County, Portola Valley would have about 320 disabled residents -- 53 with visual and hearing handicaps and 267 with physical handicaps. According to the San Mateo County center for Independence of the Disabled, the most pressing need is for affordable, ground floor units which are close to public transportation (telephone conversation, CID, March 1982). Portola Valley is a difficult place to live without a car. Major shopping, medical and social service facilities, and employment opportunities are quite a distance from the Town and many areas are not served by public transportation. It is likely that many of the handicapped residents live at The Sequoias retirement facility or are unrestricted in terms of mobility. Because of the Town's remoteness from many basic services, no special efforts appear appropriate to provide housing for handicapped people in the Town.

Elderly

- 2454 In 1980, 567 people, comprising 14.4 percent of the Town's population, were 65 years or older. The number of people 65 years or older increased 22.7 percent from 1969 to 1980 (see Table 2). The 1980 Census lists 326 people living in group quarters of which 312 are 65 years or older. These people were residents of The Sequoias, a retirement facility located in Portola Valley which provides housing, common dining, convalescent care and a wide range of activities for senior

citizens. The other people 65 years old and over were living in households. Table 13 indicates that the Town is providing a range of housing choices for its older residents. Two hundred and fifteen people 65 years or older lived in family households -- 111 as householders, 74 as spouses and 30 as "other relatives." Seven older residents were in non-family households of two or more persons and 33 lived alone. By providing for the creation of "granny units" within single family dwellings and guest houses as auxiliary uses on certain single family parcels, the Town is assisting in maintaining housing choices for its older residents.

Large Families

- 2455 Most of the housing in the Town is well-suited to large families. About 80 percent of the year-round housing units have 6 or more rooms and only 10 units were overcrowded. The trend over the last twenty years has been toward smaller household size. Persons per occupied housing unit have dropped from 3.66 in 1960 to 2.92 in 1980. However, the persons per occupied housing unit in Portola Valley in 1980 was higher than the 2.58 rate for San Mateo County.
- 2456 The decline in household size reflects the nationwide decrease in birth rates. This is particularly evident in the decreasing number of young children. As shown in Table 2, the number of children under 18 years old declined 31.5 percent from 1969 to 1980 with the steepest decline in the 5 to 9 age group. The problem in Portola Valley is not how to accommodate larger families, but how to better utilize the housing space created by the fact that families are smaller than they used to be.
- 2457 Actually, the decline in household size has not been as great as one would expect looking at the decreasing numbers of children. What appears to have happened is that increasing numbers of adult children are living at home. Table 13 shows 335 relatives between the ages of 18 and 64 living in family households. If accommodations could not be provided for these people in their family homes, they would be adding to the demand for housing elsewhere. Many middle aged persons used to provide living space for elderly parents, who are now increasingly living independently or in specially-designed facilities. Many of these families now seem to be providing housing for adult offspring.

Female Heads of Households

- 2458 In 1980, 137 households or 11.1 percent of all households in Portola Valley had female heads. Of these, 61 were one-person households, 59 family households and 17 non-family households (U.S. Census). In San Mateo County, 26.2 percent of the

households were headed by women. The lower percentage in Portola Valley is consistent with the fact that the Town is predominately a community of married-couple families. In San Mateo County, 56.1 percent of the households consisted of married-couple families; in Portola Valley, the percentage was 76.3 (1980 U.S. Census).

- 2459 The most significant barrier in the Town to households headed by women is the cost of housing coupled with the fact that women typically earn less than men. One way in which people in Portola Valley may be responding to this need is by providing space for a second household within single family houses. Also the data on household composition suggest that some women who would otherwise be counted as female householders are living with parents and classed by the census as "other relatives."

ENERGY CONSERVATION

(7) Analysis of opportunities for energy conservation with respect to residential development. (Government Code)

- 2460 The low density character of residential development in the Town provides plenty of open space between buildings which results in good solar access and is conducive to the use of solar energy. An increasing number of homes meet part of their energy requirements through solar energy. Although the Town does not require solar installations, its ordinances are permissive and pose no particular barriers.
- 2461 Most new residential development in the Town is expected to occur in clusters in the lower portions of the Western Hills. Clustered development is far more energy efficient than large lot subdivisions, saving on the energy costs of extending roads and utility service and the day to day costs of fuel for transportation. The Town also requires landscaping in primarily native vegetation in new residential development greatly reducing water requirements for landscape maintenance thereby reducing water and power consumption.
- 2462 The fact that many of the Town's residences are on septic systems rather than sewers reduces the energy needed for transport and treatment of sewage. The Town is working with the West Bay Sanitary District to develop a plan for regular maintenance of septic systems. This will allow the continuation of an energy efficient method of sewage disposal while guarding against possible negative impacts.

GOALS, OBJECTIVES AND POLICIES

A statement of the community's goals, quantified objectives, and policies relative to the maintenance, improvement and development of housing. (Government Code)

Goals

- 2463
1. To maintain and enhance the character and quality of Portola Valley's residential neighborhoods.
 2. To accommodate new residential development in a manner compatible with the rural character of existing residential development.
 3. To control the location, design and density of new residential development consistent with preserving the natural terrain and vegetative cover, avoiding areas of seismic and geologic hazards, and ensuring the adequate provision of safe access and public services.
 4. To encourage effective utilization, by all economic segments of the community, of the housing stock.

Objectives

- 2464
1. To accommodate to the extent possible, 88 new housing units between 1980 and 1985 in order to meet the Town's share of regional housing need as determined by the Association of Bay Area Governments.
 2. To provide 25 housing units affordable to very low, low and moderate income households between 1980 and 1985 through fuller utilization of existing housing space and additional secondary housing units.
 3. To eliminate structural defects in identified substandard housing units.
 4. To ensure that prospective buyers are informed of all relevant data, recorded by the Town on a parcel basis, prior to consummation of a property purchase.

Policies

- 2465
1. All housing units in the Town shall conform to the principles and standards set forth in the General Plan and Town regulations.
 2. The Town will continue to participate in regional and County efforts to increase the availability of affordable housing in the region and County.
 3. The Town will accept a share of responsibility for meeting the regional need for housing consistent with the topographic and geologic environment and fiscal and housing market constraints.

4. Housing development on major parcels in the Western Hills shall be clustered to avoid geologic hazards, limit environmental impacts and provide efficiency in use of energy and delivery of public services.
5. The Town shall continue to require that Residential Data Reports be shown to purchasers of property in the Town prior to consummation of a sale.
6. The Town will encourage adequate housing maintenance and take whatever actions are appropriate to ensure correction of identified structural defects.

ACTION PROGRAM

A program which sets forth a five-year schedule of actions the local government is undertaking or intends to undertake to implement the policies and achieve the goals and objectives of the housing element through the administration of land use and development controls, provision of regulatory concessions and incentives, and the utilization of appropriate federal and state financing and subsidy programs when available. (Government Code)

2466 The action program outlines what the Town will do from 1981 to 1985, within the identified governmental and non-governmental constraints, to meet the stated housing objectives. Because of the many constraints noted above, the Town does not expect that housing affordable to moderate, low and very low income households will be provided through new construction on vacant land. The most important opportunity to provide affordable housing is through fuller utilization of existing residential units and parcels. The Town has no direct control over how many people or who occupy housing space and has already taken the key actions that permit full and reasonable utilization of both residential parcels and units. These actions are:

1. The renting of rooms is permitted in all residential districts.
2. Guest houses are permitted on lots zoned for a minimum parcel size of one acre.
3. Guest houses with kitchens are conditionally permitted on lots of two acres or larger in areas zoned for a minimum parcel size of one acre.
4. Mobile homes are permitted in all residential zoning districts.

- 2467 1981 1. Revised the Portola Valley Housing Element and submitted a draft to HCD.
2. Adopted an ordinance permitting mobile homes in single family residential zoning districts.
3. Approved and authorized extension to 1985 of a cooperation agreement with San Mateo County re housing and community activities pursuant to the U.S. Housing and Community Development Act of 1974.
4. Reviewed and commented, as a member of ABAG, on the regional housing needs analysis work.
5. Surveyed businesses in the Town to determine the level of local employment.
6. Reviewed and updated data on remaining holding capacity by residential area.
- 2468 1982 1. Reviewed HCD comments on revised Housing Element.
2. Reviewed and commented on ABAG Housing Needs Report, particularly figures estimating Portola Valley's share of regional housing need and the distribution of need by income category.
3. Reviewed 1980 U.S. Census data.
4. Revised the Housing Element based on 1-3 above.
5. Submit the revised element to HCD for information.
- 2469 1983 1. Review permit processing procedures and fees to identify and remove any unnecessary impediments to efficient and timely review of applications for housing development.
2. Obtain information and maintain records of construction and use of guest houses and separate living units within single family residential zones.
3. Evaluate experience under the ordinance provisions regarding guest houses and separate living units within single family residences and consider changes needed to encourage utilization of single family houses and parcels consistent with objectives of the Town.
4. Review Town ordinances and make changes, as necessary, to comply with provisions of S.B. 1534 (1982) regarding second units on single family lots.

5. As potentially substandard units are identified, require building inspection and correction of structural defects.

- 2470 1984 1. Revise the Housing Element, as needed, to respond to
 & 1985 ABAG's revised housing needs allocation.
2. Continue the efforts listed above and modify plans and ordinances as necessary to meet new conditions or to incorporate new data.

PART 3 - CIRCULATION

- 3000 The elements in this part describe all circulation proposals in the planning area. The Circulation Element provides the overall description of proposals and describes in detail proposals for streets and roads. Proposals for trails, paths and bicycle lanes are found in the Trails and Paths Element. Finally, those roads designated as scenic roads are described in greater detail in the Scenic Highways Element.
- 3001 The two parkway proposals in the plan -- Skyline Parkway and Alpine Parkway -- are described elsewhere. The Skyline Parkway is described in the Recreation Element and the Alpine Parkway is described in the Alpine Parkway Plan, Part 6.

CIRCULATION ELEMENT

INTRODUCTION

3100 The circulation system is designed to provide for all necessary types of movement of people and goods within and through the planning area. All routes and facilities are interrelated and form a comprehensive system.

3101 General Objectives

1. To provide for movement within and through the planning area by automobile, bicycle, horse, and foot on an integrated system of circulation facilities. (See Trails and Paths Element for proposals for movement by bicycle, horse and foot.)
2. To accommodate each mode of transportation on a route designed and located to provide for the enjoyment and safety of the individual and to cause minimum interference with adjacent uses of land.
3. To locate, design, and develop circulation facilities so as to conserve the natural beauty of the area and minimize adverse effects on adjoining uses of the land.

3102 Description

The system of circulation facilities proposed includes riding and hiking trails, bicycle and walking paths, bicycle lanes, local roads and thoroughfares. This system would provide for a variety of types of travel throughout the planning area, and would link related land uses. Thus, local trails would provide for movement for local residents within the planning area, whereas major trails connecting the planning area with other areas would be set apart on different alignments. Thoroughfares, including freeways, and arterials, link the planning area to adjoining areas, provide channels of movement for through traffic, and handle longer distance local trips. Local roads including land service roads, minor collectors and major collectors would provide access to abutting properties, handle short distance local trips, and form connecting links with thoroughfares. Wherever possible, thoroughfares and major trails are combined in corridors of movement set in parkways or greenways.

3103 While the Circulation Element provides the necessary roads to serve the planning area, it does not necessarily provide sufficient capacity on all roads to permit a free flow condition at all times. There may be portions of some of the two-lane roads where congestion will require reduced speeds at times and where special traffic control measures may be necessary in order

to improve safety. These decisions will have to be made as an alternative to providing additional traffic lanes inasmuch as additional traffic lanes within the Town with accompanying adverse environmental impacts are not compatible with major community goals. Furthermore, it has been assumed that there will be greater reliance on public transportation in the future which could serve to reduce the need for additional traffic lanes. In line with this possibility, attention will need to be given to possible public transportation stops along the more major trafficways within the planning area.

3104 OBJECTIVES

1. To provide trafficways a) to connect the planning area with adjoining areas; and b) to the extent made necessary by physical conditions, to provide for travel through the planning area.
2. To provide for safe and reasonably expeditious movement for local residents and minimize the disruptive influences of through traffic.
3. To provide adequate local roads to: a) afford access to individual properties; b) permit safe, pleasant travel between parts of the planning area; c) connect local areas within the planning area to thoroughfares.

3105 PRINCIPLES

1. Through traffic should be handled on trafficways on the periphery of the planning area to the maximum extent possible.
2. All thoroughfares and major local roads should be carefully located, designed and landscaped to preserve the beauty of the area, prevent erosion, and help shield residents from noise and air pollution. Particular care should be given to retaining trees and other vegetative cover. Cuts and fills should be minimized and molded to natural contours.
3. Scenic routes through the area should be developed as parkways.
4. Thoroughfares and major collector roads should be located and designed so as not to separate residents from local service facilities.
5. The system of thoroughfares should be coordinated with thoroughfares in adjacent areas.
6. All thoroughfares should have rights-of-way of sufficient width to permit planting of trees and shrubs to provide a substantial buffer between the roadway and adjoining properties.

7. Where choice is required between a direct route which has adverse impact on local residents or disrupts the natural features of an area and a less direct route which has less adverse impact, the second alternative should be preferred.
8. Roads should be designed for safe travel at moderate speeds, and to minimize the cost of maintenance.
9. On-road parking should be discouraged.

3106 STANDARDS

1. Classification and definitions

- a. Freeway. A divided arterial highway for through traffic with full control of access. Trafficways carrying primarily inter-regional and inter-county traffic should be of freeway level.
- b. Arterial Road. A trafficway for through traffic with intersections at grade but with direct access to abutting property limited to the greatest extent feasible. Routes accommodating heavy volumes of traffic and connecting other local roads with inter-community, inter-county or inter-regional routes should be of arterial road level.
- c. Major Collector. A surface street with points of access to abutting property controlled or restricted, designed for local trips and mainly connecting minor collector streets and land service roads with arterial roads, and freeways.
- d. Minor Collector. A surface road with no major limitation to access to abutting property and designed for shorter distance local trips. Minor collectors usually serve one of two functions: a) provide a route of travel alternative to that provided by major collectors; or b) serve as a collector-distributor providing connections between land service roads and major collector roads or thoroughfares.
- e. Land Service Road. A road primarily for access to abutting property and not designed for general traffic use.
- f. Parkways and Greenways. See definitions in Section 2302.

2. Standards of curvature, grade, alignment, and sight distance should be conducive to safe, convenient travel on the following classes of trafficways: freeways, arterial roads, major collectors, minor collectors, and land service

roads. Within limits imposed by safety, these standards should be modified in steep and difficult terrain to ensure that the scenic qualities of the area are not damaged. Also, the "country lane" quality of roads should be fostered to the maximum extent feasible and still meet an acceptable level of safety.

3. Adequate provision should be made for pedestrian, bicycle, and equestrian crossings at appropriate locations. Specific locations should be controlled to provide adequate sight distance and minimize hazard. Such crossings should be clearly distinguished by signs and lane markings.
4. All traffic entering thoroughfares or major collector roads should be controlled by stop signs, channelization or other appropriate devices.
5. Where warranted by traffic volume and physical conditions, appropriate means of traffic control should be employed on roads other than thoroughfares and major collectors in order to provide safe, expeditious movement of traffic.

DESCRIPTION

- 3107 A system of freeways, arterials and major and minor collectors provide for movement within and through the planning area. Major through traffic would use routes either on or near the boundaries of the planning area leaving most of the planning area with only local roads to serve local traffic.

Freeways

- 3108 The Junipero Serra Freeway is shown on the plan diagram. The Junipero Serra Freeway has had a very significant impact upon the planning area in terms of accessibility, noise, and change to the landscape. Significant steps were taken to help assure that its design is compatible with the natural setting. Of particular concern have been the crossings over San Francisquito and Los Trancos Creeks. These crossings are on structures designed to minimize interference with the character of the creeks. At both of these crossings, there should be safe provisions for through trails and paths.

Arterials

- 3109 Nine arterials are shown on the plan diagram and described below.
- 3110 Alpine Road. Alpine Road serves as an arterial from Junipero Serra Boulevard to Portola Road. It is one of the two major arterials providing access to the majority of the planning area. It should remain as a two lane road within the Town limits. This is described in detail in the Alpine Parkway Plan, Part 6.

- 3111 Portola Road. Portola Road should remain as a two lane road. As the main road through Portola Valley, it is important to control the development along the road and to carry out a planting program where natural vegetation is lacking. Buildings should be well set back from the roadway in order to preserve the open qualities essential to the present rural quality of the valley.
- 3112 Skyline Boulevard. Skyline Boulevard is a State Scenic Highway. The General Plan designates the road as a part of a future parkway. It is envisioned that this will remain a two-lane facility passing through largely undeveloped land within the planning area. As a part of the parkway, several stopping points with outstanding vistas are proposed. Also, the parkway will be a corridor for trails and paths. Special building setbacks and design controls should be maintained on lands fronting on the road.
- 3113 Sand Hill Road. That portion of Sand Hill Road from Junipero Serra Freeway to Portola Road should be adequate as a two-lane road during the planning period.
- 3114 Junipero Serra Boulevard. Junipero Serra Boulevard is a two-lane facility within the planning area. Stanford University has proposed the construction of a new route further to the southwest to remove through traffic from the present alignment. The location and design of this route is under study. If such a modification is made, major potential impacts that need to be carefully evaluated with respect to the planning area include grading, visibility from the planning area, noise and physical disruption to residential areas along San Francisquito Creek, and the intersection with Alpine Road.
- 3115 La Honda Road. Most of La Honda Road is outside the planning area. It is shown, however, because it provides the principal access to the portion of Portola Valley along Skyline Boulevard and also because of its importance as a route between the bayside and coastside of the peninsula. This road will be pushed to its capacity limits during the planning period.
- 3116 Whiskey Hill Road. Whiskey Hill Road is now developed as a two-lane road and should have sufficient capacity through the planning period.
- 3117 Arastradero Road. Besides accommodating traffic to and from the residential areas in the Palo Alto Foothills, Arastradero Road provides an important link for some residents of the planning area traveling to the south Palo Alto area. Two lanes should be sufficient through the planning period.

3118 Page Mill Road. Page Mill Road will be an important road providing access to and from residential development in the lower Palo Alto Hills and Los Altos Hills. In addition, it plays an important role as a connection between the lower portion of Palo Alto and the Skyline Parkway and the Palo Alto Foothill Park.

Major Collectors

3119 The plan diagram indicates a number of major collectors; all but one are existing. Major collectors along existing routes are essentially meant to follow existing alignments. The proposed major collector is a loop road with connections to Alpine Road on either side of Junipero Serra Freeway and serving the adjoining Webb Ranch area.

Minor Collectors

3120 Some of the minor collectors indicated on the plan diagram are existing while others are proposed. The existing ones are proposed to follow essentially the existing alignments while the proposed routes are only general in location. Not all of the minor collectors are shown on the plan diagram. Additional minor collectors will be needed, and in the main these can be constructed in conjunction with private development.

3121 Alpine Road, from approximately 2,000 feet west of Willowbrook Drive, is designated a minor collector to its intersection with Ciervos Road (approximately 1,000 feet southeast of Joaquin Road). This length of road passes through a steep-sided, narrow canyon of great natural beauty. Accordingly, this canyon is designated as a greenway. This length of road can not be widened without great harm to the environment and should therefore remain a narrow road. It is likely it should remain a one-lane facility with increased places for passing. Southeast of Ciervos Road the grade and alignment are extremely poor and it is recommended that the road be closed to other than emergency vehicles and used for trail and path purposes.

3122 While the Comprehensive Plan Diagram does not show road connections from the floor of the valley to Skyline Boulevard within the planning area, except for Old La Honda Road, it is recognized that some minor connections will be appropriate. Such connections should be for emergency purposes.

TRAILS AND PATHS ELEMENT

INTRODUCTION

- 3200 Many activities may be provided for by a network of trails and paths in the planning area. Children reach schools, shops and after-school play areas by bicycle and on foot, and they walk to bus stops. Strollers take short neighborhood walks, especially when the way is safe and pleasant. Horseback riders take longer recreational rides and seek out the more remote scenic canyon or ridge. An occasional organized riding group sets off for out-of-town destinations. The hiker escapes to the most undeveloped and rugged places as do children. A nearby coach sends his track team to Skyline for training. Bicycle enthusiasts and runners from nearby and within the Town speed along flat shoulders and paths for health and sport. They are replaced on weekends by bicycling children and families enjoying the pleasant natural surroundings. A few Portola Valley residents bicycle to work. A school class walks to a select site for a nature lesson. A rider or a hiker stops at a scenic spot, a destination that has spurred him on, to rest. Motorists stroll away from the Skyline Parkway road to picnic. People who pass one another at a leisurely pace, stop and chat. And those who use and appreciate the open spaces of the Town will take on a protective attitude and will seek to protect these areas against all manner of destruction -- from fire to inappropriate development.
- 3201 The Trails and Paths Element includes: objectives, principles, and standards; a description; and a plan diagram. The Trails and Paths Element provides a guide to the second step in establishing a free and unimpeded network that will allow and promote trail and path use.
- 3202 The gradual development of the trail and path system will be accomplished through the subdivision process, through the application of regulations included in the Town's subdivision ordinance at the time land is subdivided, through public programs of acquisition and development, and through cooperative private efforts.
- 3203 The trails and paths shown on the Trails and Paths Plan Diagram (included separately) include those presently developed and those proposed on public rights-of-way or easements, together with new trails in locations where no right-of-way or easement exists at present. Some trail and path routes are indicated as being on or adjacent to public streets or easements, or following property lines and such locations are intended to be controlling. Where proposed trails or paths traverse unsubdivided lands, routes are intended to indicate general location and the purposes could be secured even with considerable variation in location and alignment.

3204 Upon adoption of this plan it shall be the policy of the Town of Portola Valley not to open or develop any new trail or path or acquire any new trail or path easement, except in the normal subdivision process, without first: 1) determining if the proposal is in conformity with the General Plan; 2) holding a public hearing after giving notice to the owners of land abutting on such proposed trail, or path, or easement; 3) applying Town Council policy that trail easements will not be established on developed residential lots without the property owners' consent. Town Council action on such matters will be taken only after giving due consideration to the facts and opinions presented at the public hearing. Development of trails and paths should be in accordance with the construction standards and inspection procedures previously adopted by the Town. The Town should give consideration to formulating maintenance standards and rules for trail and path users to provide additional guidance to the maintenance and use of the trails and paths system. Where a property owner desires to place planting on a public easement that exists in a location where a trail or path is indicated on the General Plan, and before such use is made by the property owner, he shall make a presentation to the Town Council and there shall be a public hearing to determine if such use is in the public interest.

3205 The Trails and Paths Element proposes a comprehensive system of trails and paths. This system provides for horseback riding, hiking for pleasure, walking to schools and other community facilities, and bicycling for pleasure as well as to and from local destinations. The more major trails and paths also provide for travel through the planning area, and for residents to travel from the Town to nearby destinations. The character and quality of the trail and path system is intended to have high scenic value throughout because of the low density rural character of the community and the Town's dedication to furthering the concept of Portola Valley as an open space preserve in the Midpeninsula Area.

3206 OBJECTIVES

1. To provide a system of hiking and riding trails, pedestrian paths, bicycle paths and lanes to: *
 - a. provide recreation, particularly scenic, quiet, leisurely neighborhood walks and rides;
 - b. furnish easy access to trails from individual properties;
 - c. permit safe, pleasant travel between parts of the community;

* For definition of terms, see section entitled STANDARDS

- d. connect local areas within the Town to through trails and paths within and adjoining the Town;
 - e. create opportunities for nature and conservation education.
2. To create a tradition of access to and use of open space so that citizens will not willingly relinquish these rights under the pressure of urbanization. Access to and use of open space should be circumscribed to the extent necessary to prevent undue interference with use and enjoyment of private property

3207 PRINCIPLES

1. General

- a. Whenever possible, trails and paths should be separated from auto parking areas and roads - particularly those carrying heavy traffic.
- b. Whenever possible, trails and paths should follow creeks and canyons, scenic ridges and other routes of natural beauty and avoid developed properties.
- c. The system should provide a variety of local recreational loop trips convenient to residents and possible to complete in one to four hours.
- d. High usage requires separate alignment of all facilities, but where use is moderate, riding and hiking trails, or pedestrian paths, bicycle paths and hiking trails can be combined as single facilities.
- e. Routing and construction of trails and paths should be done with great care so that they:
 - 1) disturb as little as possible the natural conditions of terrain and vegetation;
 - 2) provide a variety of experiences for users;
 - 3) provide convenient, safe passage;
 - 4) minimize intrusion on privacy in residential areas;
 - 5) encourage use without incurring excessive maintenance costs.
- f. The number of crossings of roads, particularly thoroughfares should be at a minimum and where they are necessary, crossings should be located, designed, and marked to provide maximum safety.

- g. The junctions of trails and paths with roads should be limited in number and so designed and located to minimize over use by people arriving in motor vehicles.
- h. Through trails, paths and bicycle lanes should connect to those in adjoining jurisdictions, and within the Town special care should be taken to minimize intrusion into residential areas.
- i. Through routes should be marked so that they can be easily followed and so that deviation onto local trails will be minimal. Markers should be unobtrusive.
- j. Fences, warning signs and gates to discourage wandering off trails and paths onto nearby properties should be used only where absolutely necessary. The emphasis should be put instead on routing trails and paths to avoid such problems with reliance on vegetation barriers and well-built, well-maintained, and well-marked facilities to keep users on trails.
- k. The trails, paths and bicycle lanes of the Town are not to be used by motor vehicles. Design should discourage or prevent such use where feasible even if it creates some inconvenience to legitimate users.
- l. Stopping places should be provided at scenic spots (trailside preserves) that can easily be reached on foot.
- m. Trails and paths should skirt rather than traverse grasslands to avoid scarring and creating erosion problems.

2. Riding Trails

- a. Riding trails should be routed to serve all community stables and residential areas where horsekeeping on lots is prevalent.
- b. Trail design should be such that horses are discouraged from leaving the trail in developed parts of parks, shopping areas, school yards, and other such places where they would be a hazard and a nuisance. Hitching racks should be provided at the limits of such areas and routes chosen so that riders will detour rather than traverse them.

3. Hiking Trails

- a. Because hiking trails and riding trails require different grades and alignments and because horses depreciate the hiking experience, separate hiking and riding trails, especially in steep, unstable terrain, are warranted.

- b. Part of the hiking trail system should be constructed so as to provide for short, easy neighborhood strolling.

4. Bicycle and Pedestrian Paths, Bicycle Lanes

- a. In the less precipitous parts of the Town, pedestrian paths and bicycle paths and lanes should provide convenient and safe access to community facilities, particularly to schools.
- b. Pedestrian paths should be provided where needed along busy streets to serve school bus stops.
- c. The pavement of short culs-de-sac may be used in lieu of paths and bicycle lanes if they provide safe bicycling and walking, but riding trails should not be on the pavement.
- d. Bicycle lanes should be provided and marked on the paved shoulders of most, if not all, arterials where high speed bicycling is anticipated, and provided elsewhere, as necessary, for more local use -- especially to serve children going to school.

3208 STANDARDS

1. Definitions

- a. Hiking Trail - A way suitable for hiking not generally used by horses. Generally unsurfaced.
- b. Riding Trail - A way suitable for horseback riding also used by hikers. Generally unsurfaced.
- c. Pedestrian Path - A way suitable for pedestrians and minor bicycling. Surfaced. Not generally used by horses.
- d. Bicycle Path - A way suitable for bicycling and for pedestrians. Surfaced. Not used by horses.
- e. Bicycle Lane - A paved border of a road separated by a stripe or other means from the motor vehicle lanes. For use by bicycles with auto parking prohibited except for emergencies.
- f. Through Trail or Path - A facility passing through Portola Valley, but which can also be used by residents for shorter trips within the Town.
- g. Local Trail or Path - A facility for trips within Portola Valley or affording connections to through trails or paths.

- h. Trailside Preserves - Small areas generally near or on trails or paths accessible to users where unique, attractive, or valuable views, groves, or other natural features may be enjoyed or conserved.
2. Pedestrian paths and bicycle paths and lane facilities should provide access to schools within at least the following distances from schools as measured by the shortest traveled road:

	<u>Pedestrian Path</u>	<u>Bicycle Path and/or Lane</u>
Kindergarten - Grade 3	3/4 mile	1-1/4 miles
Grades 4 to 8	1 mile	2 miles

3209 DESCRIPTION

The facilities intended to meet the needs of riders, hikers, walkers, and bicyclists are shown on the trails and paths plan diagram. This diagram shows a system of through trails for the entire planning area and a system of local trails and paths in the eastern developed portion. In the large undeveloped western part of the Town, it is recommended that as development plans are prepared the routes shown should be refined and a more extensive local trail and path system developed.

3210 The connections of through trails to bordering jurisdictions are indicated. Walkers and riders from outside the Town are expected to be relatively few -- largely residents from near the Town limits. Bicyclists, because they can travel further and faster than walkers and riders, are expected to be the principal visitors. To discourage use of local trails by motorists leaving their cars, no auto parking facilities should be provided adjacent to any trail, except as may be required to serve a local facility or as may be necessary to permit reasonable use and enjoyment of Skyline parkway.

3211 The diagram does not indicate through routes as distinct from the local routes, nor does it distinguish what can be called main routes. Main routes would include the through trails and paths and most heavily used and essential parts of the local routes, and would be the routes most clearly a public responsibility. The designation of the main routes and a study of maintenance cost for them is needed.

Riding Trails

3212 An extensive system of riding trails exists in the developed part of the Town. It is primarily a roadside system on the road rights-of-way and adjacent private easements. The plan proposes only minor changes and additions to these existing trails to improve hazardous situations, and secure the few opportunities that remain for good off-road riding in natural surroundings.

- 3213 Some of the best riding opportunities in the eastern portion of the Town are outside the Town limits but largely within the planning area -- along the floor of Portola Valley to Searsville Lake, along San Francisquito Creek to Los Trancos Creek and along Los Trancos Creek. Further development of a permanent riding system in these valley-bottom areas will be dependent upon cooperation with other jurisdictions and the major property owner, Stanford University. The integrity of Jasper Ridge and the Searsville Lake marsh needs to be protected in order to preserve these areas for research and wildlife; therefore, no trails or paths should penetrate these areas.
- 3214 In the western undeveloped part of the Town three major traversing riding trails are proposed -- two near the valley floor and one along Skyline. The lowest trail is the riding trail generally along Portola Road, and the upper trail would be an integral part of Skyline Parkway. Connections from the valley floor to the Skyline are proposed. One major connection leads from Portola Road north of the intersection with Westridge Drive. This connection would serve a principal source of horse-generated traffic -- being directly accessible to the Springdown Farm Boarding Stable and close to the intersection of Westridge Drive with a trail connection serving Westridge.

Hiking Trails

- 3215 Riding trails will be used by hikers to a limited extent in all parts of the Town but the main hiking areas and trails are limited to the western, still-to-be developed part of Town. A major hiking trail here is a traversing route with varied scenery that crosses many spurs and canyons. This route will provide for short easy strolls into undeveloped canyons as well as for more rigorous hiking to and along the canyons themselves.

Pedestrian Paths

- 3216 The proposed pedestrian path system is limited in extent. Hopefully, it will provide permanent, safe, reasonably direct access to schools for most children living nearby -- the prime function of the paths proposed. The system is limited because of the difficulty of providing paths in already developed areas, the desire to avoid the more urban aspects and costs of a complete walkway system, and the assumption that most people intent on reaching community facilities (in contrast to making a recreational trip) will not walk far, especially over steep slopes. Pedestrian paths for strolling and for reaching bus stops should be provided in new developments, but are not proposed for the developed part of the Town because they would be difficult and costly to establish. Improved bus loading areas and shelters as supported by the school district, are recommended.

Bicycle Paths and Lanes

- 3217 Bicycle paths blending smoothly to bicycle lanes provide for local trips to school and community facilities and for recreational loop trips. Most routes proposed are restricted to the valley floor because the hills are too steep for the average bicyclist. One local route is proposed along the eastern, developed side of the valley and another along the western, undeveloped side, with several cross connections. A through bicycle path along Alpine Parkway is partially completed with the balance planned for construction from Junipero Serra Boulevard to Portola Road. This facility should extend to Skyline Parkway up Los Trancos Creek. This bicycle path would be joined by the proposed bicycle path along the west side of Portola Valley.
- 3218 In addition to the bicycle paths, the plan shows bicycle lanes on steep roads for safe pleasant downhill travel that paths cannot provide. Also indicated is an uphill route on a hiking trail following the spur of the Windy Hill for those wishing to push their bicycles directly up to the Skyline Parkway where bicycle lanes and a path are major regional facilities.
- 3219 To maximize the amount of off-road bicycling and riding, to avoid intrusion into the congested town center area, and to avoid the narrow, busy confines of Portola Road, it is recommended that a portion of the main bicycle path and riding trail along the Alpine Road - Portola Road route be relocated as soon as possible up Los Trancos Creek for a short distance and then along the west side of Portola Valley.

PLAN DIAGRAM

- 3220 The plan diagram showing the trail and path proposals is entitled Trails and Paths Element Plan Diagram and included separately in Pocket 2 following Part 6.

SCENIC HIGHWAYS ELEMENT

INTRODUCTION

- 3300 The State scenic highway legislation passed in 1963 set up a plan and program for the designation of "Official State Scenic Highways." These were to be limited to state highways that traversed corridors of outstanding natural scenic beauty. The routes, nominated by local jurisdictions, were included in a Master Plan approved by the state. Official state designation comes only after the local jurisdiction provides assurance that the scenic quality of the road will be maintained, and after such plans are approved by the Department of Transportation. Skyline Boulevard in San Mateo County, south of the Half Moon Bay road to the county line, was the second highway in the state to receive official designation. Scenic highway law also authorizes the State Department of Transportation to designate county highways as "Official County Scenic Highways."
- 3301 In 1973 the legislature required of all cities and counties a Scenic Highway Element. Inclusion of roads in this element could in some cases be a first step toward official designation as with state or county scenic highways. The legislation also provides for "unofficial" scenic highways, and is not meant to preclude local agencies from developing and adopting local scenic routes.

OBJECTIVES

The objectives of the Scenic Highway Element of the General Plan are:

- 3302 1. To comply with Section 65302 (h) of the California Government code, enacted in 1973, which requires of all cities and counties that "the general plan shall include a scenic highway element for the development, establishment, and protection of scenic highways pursuant to Article 2.5 (commencing with Section 260) of Chapter 2 of Division 1 of the Streets and Highways Code."
2. Because Portola Valley is a place of unusual natural beauty, all roads in Portola Valley can be considered "scenic." However, it is possible that the pressure of increasing development and resultant traffic could lead to erosion of the aesthetic quality of our roadsides. The Scenic Highway Element of the General Plan should be a guide to the maintenance of the scenic qualities of our major roads.

DESIGN POLICIES

3303 These policies are intended to guide future actions of the Town and private parties.

1. Regulate density and land use, as provided in the General Plan and zoning ordinances, with special attention to the view from the road.
2. Give special consideration to site development, including controlled access for driveways and special setbacks for buildings.
3. Keep the amount of roadway cuts and fills required in road maintenance or construction to a reasonable minimum.
4. Contour and plant cut and fill slopes as an integral part of the road design, construction and maintenance process.
5. Carefully control earth moving, grading, contouring and replanting in areas adjacent to and visible from the road.
6. Sign Regulation and Control - All commercial signs on scenic routes must be of such design as to be in keeping with a rural and natural atmosphere.

Keep traffic signs and markers to a minimum and place with consideration for the visual quality of the road.
7. Control the design of all structures abutting scenic routes. Extend Architectural and Site Control Commission review to all such structures.
8. Landscape all development along scenic routes and maintain such landscaping.
9. The Town should be responsible for the regular pick up of trash in the rights of way of Town scenic routes.
10. Encourage planting of native wildflowers, shrubs and trees on public and private property. Wherever possible remove alien and hostile volunteers such as pampas grass and scotch broom.
11. Provide hiking and riding trails and bicycling paths separated from the pavement, where possible, as a part of future road improvements.
12. As a condition of their conditional use permit, require commercial developments along scenic roads to maintain a neat and tidy appearance. Surroundings of the buildings must be kept clean, and planted areas must be maintained.

13. Give high priority to placing underground all existing overhead utility lines along the Town scenic roads. Do not erect new or additional overhead facilities.

DESCRIPTION

- 3304 The regulations of the Town of Portola Valley are designed to protect the natural beauty of the whole area, including roadways. Skyline Boulevard is already an officially designated State Scenic Highway. It is not anticipated that official state designation will be sought for the Alpine or Portola Roads. Nevertheless it is the intention of the Town to protect and enhance the appearance of scenic roads and highways by careful attention to adopted design principles.

State Highways

- 3305 The two state highways designated in this plan as scenic highways are Skyline Boulevard and Highway 280.
- 3306 Skyline Boulevard (Route 35) from the intersection with Route 92, south to the county border, became on January 22, 1968, the second Officially Designated Scenic Highway of the state. Town regulations for that part of the Skyline corridor lying within the Town, as approved by the state, may be found in pages 58 to 76 of A Proposed Corridor Plan for a Scenic Highway, Skyline Boulevard, San Mateo County published by San Mateo County in September, 1967.
- 3307 Special Town regulations adopted for the Skyline corridor should continue to provide for special building setback lines and design reviews.
- 3308 Part of Highway 280 is within the planning area and the sphere of influence of the Town. The Town has recommended that Interstate Highway 280 be officially designated as a State Scenic Highway, because of the beauty of the countryside through which it passes and because of the many excellent features of its design.

Local Scenic Roads

- 3309 The two roads designated in this plan as local scenic roads are Alpine Road and Portola Road.
- 3310 Alpine Road is now a route of great natural beauty and variety. The creeks it follows through the foothills are lined with tall trees and the countryside has kept much of its rural tranquility. The mountain canyon is still wild and new views open up at each turn of the road. A superb scenic route already exists. It is threatened by change. The challenge is to find and pursue the ways that can protect and preserve this route through the mountains for our present enjoyment and the delight of future generations.

- 3311 The Town has, since its incorporation, endeavored to protect the scenic quality of the Alpine corridor. From a policy statement adopted in July 1969:
- 3312 "The policy of the Town of Portola Valley has always been to maintain a tranquil, rural atmosphere, and to preserve a maximum of green open space. The Alpine Parkway should be developed in accordance with the policy. The natural look and feeling of the land between the road and the creek should be maintained. Trees and natural growth should be preserved and increased. Recreational uses should be in keeping with a peaceful and rural atmosphere."
- 3313 In May, 1971, the Town adopted the Alpine Parkway Plan, Part 6, as a part of the Town General Plan which includes detailed description of the road and of related design policies. Special provisions to implement the plan and to protect the corridor include:
1. Open space zoning for sections of the corridor.
 2. Special setback lines along a major portion of Alpine Road.
 3. An Open Space Program which does and should include recommendations for land acquisition in and regulations of the corridor.
 4. The Recreation Element and the Trails and Paths Element which include proposals for trails and paths in the corridor.
- 3314 Alpine Road above the intersection with Ciervos Road may become a recreation route for horse, bicycle and pedestrian traffic only. The Town has expressed its approval of this proposal. Nothing in this plan is meant to negate this concept.
- 3315 Portola Road within the confines of Portola Valley is the most "urban" of the scenic roadways. It is nevertheless a road of more than usual natural beauty, running through what may be considered the heart of the Town - the floor of Portola Valley - including residential areas, The Sequoias, the meadow, orchards, stables, and institutional property.
- 3316 It is Town policy that land abutting our scenic routes should be zoned to maintain the maximum possible open space and scenic quality. Land to the south and west of the road is under special restriction, local and state, because it is underlain by major fault traces. The regulations of the Town, and the design principles for Portola Valley scenic roads, should be sufficient to preserve the natural rural beauty of this corridor.

Connecting Roads

- 3317 Scenic roads in other jurisdictions such as Woodside, Menlo Park, Palo Alto and San Mateo County which connect to Portola Valley scenic roads are to be encouraged so as to provide a continuous quality of road corridor. All scenic roads in Portola Valley do, in fact, continue into adjoining jurisdictions. Also, the small portion of Arastradero Road in the Town should be treated so as to be compatible with the scenic character in Santa Clara County and Palo Alto.

PART 4 - ENVIRONMENTAL QUALITY

4000 The elements in this part describe certain environmental quality objectives and criteria that pertain throughout the planning area. Three elements are included in Part 4: the Seismic Safety/Safety Element, the Conservation Element, and the Noise Element.

SEISMIC SAFETY/SAFETY ELEMENT

INTRODUCTION

Purpose

- 4100 The Seismic Safety/Safety Element (SS/S Element) presents: 1) an identification and evaluation of geologic and fire hazards in the Portola Valley planning area, 2) a statement of official Portola Valley Town policy for the avoidance, reduction, or abatement of those hazards, and 3) guidelines for disaster response. The basic purpose of the element is to provide a policy basis for measures the Town should take to prevent loss of life, reduce injuries and property damage, and minimize economic and social dislocations which could result from earthquake, conflagration, and certain other natural hazards.

Scope

- 4101 The element deals with the potential geologic and fire hazards to persons and property in the planning area. Thus, geologic hazards, and fire hazards are treated while such hazards as wind storm, lightning, falling trees, unsafe structures, motor vehicle accidents, and crime (including theft, threats to personal safety, and vandalism) are not included. These latter and other hazards are dealt with to some degree in other elements of the General Plan. In addition, Town regulations and State laws provide public policy and regulate conduct in relation to a wide range of hazards. Consideration should be given to further evaluation of the wide range of hazards in relation to current governmental regulations and programs in public safety fields to determine the further extent to which the powers and resources of Town government could be beneficially utilized to improve public safety. Specific hazards could be ranked in relation to impact, efficacy of present programs, and costs. The basic question is: How can Town powers to inform, regulate, or provide facilities and services be more beneficially applied (in a cost-effective sense) to increase public safety without unduly infringing upon personal freedom of choice and action?

Definitions

- 4102 The following definitions of technical terms are used in this element of the General Plan:

Hazard: a source of danger, peril, or jeopardy.

Risk: the chance of injury, damage, or loss.

High Risk: high probability of property loss and/or personal injury.

Seismic: pertaining to or caused by an earthquake.

Fault: a plane or surface in earth materials along which shear failure has occurred and materials on opposite sides have moved relative to one another in response to the accumulation of stress in the rocks.

Active Fault: a fault that has moved in recent geologic time (10,000 years m.o.l.) and which is likely to move again in the relatively near future.

Inactive Fault: a fault which shows no evidence of movement in recent geologic time and which is inferred to have little potential for movement in the relatively near future.

Fault Zone: a zone of related faults which commonly are braided and sub-parallel, but which may be branching and divergent. Its width ranges from a few feet to several miles.

Fault Trace: the intersection between a fault plane and the ground surface. It is graphically portrayed as a line plotted on geologic maps.

"Maximum Probable" Earthquake: the greatest magnitude earthquake which can reasonably be expected to occur in a particular area.

Ground Failures: includes landslide, soil liquefaction, lurch cracking*, surface faulting, ground settlement, lateral spreading*, soil creep, soil expansion.

Soil Liquefaction: change of water-saturated cohesionless soil to fluid-like state usually from intense ground shaking; soil loses strength and flows as a liquid.

Landslide: the downslope movement of masses of earth material along a slip surface.

Active Landslide: a landslide which is moving or shows signs of movement within historic time.

Ancient Landslide: a landslide deposit which does not show signs of having moved within historic time.

Landslide Deposit: earth materials which have been deposited through the process of landsliding.

* Not considered to be a significant hazard in Portola Valley, but if new information reveals problems of public concern, the element should be expanded to address the hazard.

San Mateo City-County Planning Task Force Report

- 4103 During 1974-75 Portola Valley cooperated with the other cities in San Mateo County and the County in the preparation of a draft Seismic and Safety Element. The County draft provides a broad setting for the Portola Valley element and includes matters which could later provide a basis for modifications to the Portola Valley element. The draft County element is in two volumes as follows: Seismic & Safety Elements of the General Plan, Volume One: Goals, Policies and Programs; Volume Two: Technical Supplement.

GOALS

- 4104 The basic goals of the Town of Portola Valley in adopting this element of the General Plan are to prevent loss of life, to reduce injuries and property damage, and to minimize economic and social dislocation which may result from earthquakes, other geologic hazards and fires.

OBJECTIVES

- 4105 The objectives of the Town of Portola Valley in adopting this element of the General Plan are:
1. To define the relative degree of risk in various parts of the planning area so that this information will be used as a guide for minimizing or avoiding risk for new construction, and for risk abatement for existing development.
 2. To minimize the risk to human life from structures located in hazardous areas.
 3. To provide a basis for designating land uses which are appropriate to the geologic and fire risks of the various portions of the planning area.
 4. To ensure that facilities whose continuing functioning is essential to society, and facilities needed in the event of emergency, are so located and designed that they will continue to function in the event of fire or natural disaster.
 5. To facilitate post-disaster relief and recovery operations.
 6. To increase public awareness of geologic and fire hazards, and of means available to avoid or mitigate the effects of these hazards.

GENERAL POLICIES

- 4106 The following several policies are intended to guide the Town and private parties in future actions.

1. Control uses of land to avoid exposure to risk in excess of the level generally acceptable to the community (defined in this element as "Acceptable Risk").
2. Locate the works of man, to the maximum extent feasible, to avoid areas which present high risk exposure.
3. Limit development in hazardous areas to structures and improvements, damage to which would not threaten human life or cause substantial financial loss, or engineer the development or site to mitigate the hazard.
4. Where utility lines and roads are located in or cross high hazard areas, take all reasonable measures to insure continuity or quick restoration of service, and prevention of secondary hazards such as fire or flood.
5. Do not subdivide land in high hazard areas unless and until adequate mitigating measures are assured.
6. Locate, design and operate critical facilities, such as major transportation links, communications and utility lines, and emergency shelter facilities, in a manner which maximizes their ability to remain functional after a disaster.
7. Design and construct new structures to withstand, within levels of acceptable risk, the hazards known to exist at their locations.
8. Additions to or modifications of existing structures, should not decrease the ability of the original structure to withstand any earthquake or other geologic hazards.
9. Make the public aware of hazards and measures which can be taken to protect their lives and property.
10. Require reports of geologic and/or soil investigations in all instances in which a permit is sought and available information indicates a potential substantial threat to life or property from a geological hazard.
11. Record the location and extent of areas covered by soil and geologic investigations received by the Town on a Town map and consider the reports thereon to be public records. Where appropriate the results of such detailed investigations will be utilized to supplement and supersede more general information.

ACCEPTABLE RISK (In Relation to Structures and Occupancies)

4107 This section: (a) defines the term "acceptable risk", and (b) assigns various structures, occupancies, and land uses to risk classes.

Acceptable Risk

- 4108 The term "acceptable risk" is used to describe the level of risk that the majority of citizens will accept without asking for governmental action to provide protection. To illustrate this point: consider a site which is subject to occasional flooding. If the chances are one in a thousand that the site will be flooded in any given year, local citizens will probably accept that risk without asking for special protection. If the chances of flooding are one in ten, however, either governmental regulations would be enacted to keep people from building on the site (in order to protect life and property), or property owners would ask that government build protection devices to control the flood waters.

Classification of Structures and Occupancies

- 4109 Five major classes of structures and occupancies are established in Table 1 for the purpose of risk rating. The first two classes include critical facilities and occupancies -- those structures and occupancies which are especially important for the preservation of life, the protection of property, or for the continuing functioning of society. Less critical structures and occupancies are included in Classes 3, 4, and 5. The table includes structures and occupancies not presently or likely to ever be in the Portola Valley planning area. They are included, however, to provide a context for the particular structures and occupancies relevant to the planning area. The fourth column in Table 1 describes the maximum amount of damage deemed acceptable in the event of a great earthquake similar to the 1906 earthquake or in the event of a major fire. The last column classifies the acceptable damage in terms of acceptable risk.

POTENTIAL HAZARDS IN THE PORTOLA VALLEY PLANNING AREA

- 4110 Each of the following potential hazards as it relates to the Portola Valley planning area is briefly described in the following pages:

Geologic Hazards (including seismic)

1. Faulting
2. Ground Shaking
3. Landsliding
4. Ground Settlement
5. Soil Liquefaction
6. Flooding
7. Erosion and Sedimentation
8. Expansive Soils and Soil Creep

Fire Hazards

Table 1
RISK CLASSIFICATION OF STRUCTURES, OCCUPANCIES, AND LAND USES

CLASS	GENERAL CATEGORY	GENERAL EXAMPLES	ACCEPTABLE DAMAGE TO FACILITY	LEVEL OF ACCEPTABLE RISK
1-A	Facilities whose failure might be catastrophic	Nuclear reactors, large dams	None which would result in exposing affected population to death or injury	near zero
1-B	Facilities whose continuing function is critical	Power plants, power intertie systems	None which would impair safety of facility or disrupt function	extremely low
2-A	Facilities critically needed for services after disaster	Hospitals, fire stations, telephone exchanges		extremely low
2-B	Critical transportation links	Regional highways, bridges, rail lines, overpasses, tunnels	Minor non-structural; facility should remain operational and safe, or be susceptible to quick restoration of service	low
2-C	Major local utility lines and facilities	Power substations, gas and water mains		low
2-D	Small dams	Small dams	None which would expose "down-stream" population to injury	extremely low
3-A	High occupancy structures	High-rise apartments and offices, schools	No structural damage; minor non-structural damage, but structures should remain safe and usable	low
3-B	Facilities highly desirable for shelter after disaster	Schools, churches, civic buildings		low
3-C	Local roads, utilities and communication facilities	Local roads, local utility lines	Damage should be susceptible to reasonably rapid repair (or utility shut-off)	moderate
4-A	Medium occupancy structures	Most commercial and industrial buildings, apartments		low
4-B	Low occupancy structures	Single family homes	Structural integrity must be retained; non-structural damage should not unduly endanger safety of occupants	low
5-A	Open space, with developed sites	Recreation areas, orchards, vineyards		moderate
5-B	Open space, with undeveloped sites	Grazing lands, forests	Not applicable	moderate

4111 Documents upon which these descriptions are largely based and which provide additional pertinent information are listed in Appendix 1. Also, the most pertinent references for each type of hazard are listed by numbers in parentheses within and following each hazard summary.

4112 The descriptions of the hazards contained herein and in the sources cited in Appendix 1 provide the general basis for applying the policies set forth in this element. As new information becomes available which supplements or modifies these descriptions of hazards, such new information, when officially accepted by the Town, may be used in applying or interpreting Town policy.

Faulting

4113 Portola Valley is bisected by the San Andreas Fault Zone which is made up of a large number of individual fault traces along which movement has occurred at some time in the past. A few of the traces of the San Andreas Fault Zone are considered to be active; some are deemed to be inactive; and others are poorly defined or are as yet unrecognized, and the possibility of their activity is questionable. Experience in California and in other parts of the world where active faulting is taking place indicates that future fault movements are most likely to occur along the traces of recent displacements. Ground rupturing, with horizontal displacements of 8 to 10 feet, took place along several fault traces through Portola Valley in the 1906 earthquake. Measurable earth strain and other geologic considerations suggest that similar or greater amounts of displacement may be anticipated in the Portola Valley area in the years ahead. Recurrence intervals for major movements along the Portola Valley segment of the San Andreas Fault are calculated to be approximately 100 years.

4114 Although future fault movement is generally anticipated along only those faults judged to be active, there is always the possibility that movement may occur along traces deemed to be inactive, previously unrecognized, or newly formed. The most detailed information regarding the description and location of the most readily recognizable active fault traces in the Portola Valley area is contained in the report by W.R. Dickinson entitled "Commentary and Reconnaissance Photogeologic Map of San Andreas Rift Belt, Portola Valley, California" (1) 1/and accompanying map (2).

1/ All references referred to by number are listed in complete citation form in Appendix 1.

4115 The traces of the San Andreas fault zone judged to be active and with significant potential for future displacement are shown with distinctive heavy lines on the Geologic Map of the Town of Portola Valley (Scale 1" = 500') (3). Fault traces from this source are also shown on the Special Studies Zones Maps of the Mindego Hill and Palo Alto Quadrangles (Scale 1" = 2000') (4) issued by the California Division of Mines and Geology in compliance with requirements of the Alquist-Priolo Special Studies Zones Act.

4116 The hazard associated with active fault traces is clear. Any structure built across such a trace and subsequently offset by faulting would be in danger of collapse and constitute a threat of life. Studies of the San Andreas Fault in California and other similar faults elsewhere in the world show that dislocations associated with faulting tend to be concentrated along relatively narrow traces. A belt of disturbed ground several hundred feet wide or more, characterized by secondary fractures and cracks, ground lurching and warping may develop along traces of dislocation. Although deformation of this zone may result in serious structural damage to buildings within it, the risk of structural collapse due solely to permanent ground displacement is considerably less than for sites across or immediately adjacent to the principal trace of movement. For further information, see also references (4a) (4b) (4c) (4d) (5) (6) (7) (8) (9) (10) and (11).

Ground Shaking

4117 Although sparsely populated, the Portola Valley area experienced considerable damage from ground shaking in the 1906 earthquake, which is estimated to have been of a Richter magnitude* 8.3, with local intensities ranging from VIII to X, on the Modified Mercalli scale** (1956 edition).

4118 Experts estimate that there is a "significant probability" that the San Andreas Fault will produce an earthquake of the magnitude of the 1906 earthquake sometime during the next 30 years (12); this could be in the Portola Valley area, or elsewhere along other sections of the fault.

* Magnitude is an objective, instrumentally determined measure of the energy released by an earthquake at its source. The Magnitude Scale is logarithmic, hence an increase in one unit of magnitude (e.g. 6 to 7) represents a ten-fold increase in energy released at the source.

** See Appendix 2 for explanation of the Modified Mercalli Intensity Scale.

- 4119 The characteristics of a "maximum probable" earthquake which might affect the Portola Valley planning area are described in Table 2. In estimating risk of loss from an earthquake, the occurrence of the maximum probable earthquake (8.3 Richter, XI Mercalli) should be the assumed basis for prudent planning.

Table 2

MAXIMUM PROBABLE EARTHQUAKE ON THE SAN ANDREAS FAULT

Magnitude	8.3
Maximum(a) Acceleration (g)	0.5 g (peak 1.0g)
Predominant(a) Period (Seconds)	0.2 to 0.45
Probable Duration(b) of Strongest Ground Shaking (Seconds)	35+(total duration 50 to 60)
Maximum Modified Mercalli Intensity	XI

(a) see Schnabel and Seed (13)

(b) see Seed (14)

- 4120 Effects of ground shaking in Portola Valley would vary with different underlying rock formations, soil conditions, and the amount of underground water present. Those areas underlain by relatively thick, unconsolidated, water-soaked surficial sediments (such as some recent alluvial deposits) have a greater potential for damaging effects due to ground shaking than do areas of firm bedrock. Table 3, below, defines three "geologic categories" in the Portola Valley planning area in which the geologic materials are grouped on the basis of their anticipated response to seismic shaking. Materials in Category A are considered likely to respond more actively to an earthquake than those in Category B, which in turn, would respond more actively than those in Category C.

Table 3

RELATIVE GROUND SHAKING POTENTIAL
IN THE PORTOLA VALLEY PLANNING AREA*

Increasing Ground Shaking Potential	GEOLOGIC CATEGORY A	<u>SURFICIAL MATERIALS</u> - generally young, often saturated, unconsolidated alluvial deposits of gravel, sand, silt, and clay commonly confined to valley floors; slope wash; landslide debris and artificial fill.
	GEOLOGIC CATEGORY B	<u>NEAR-BEDROCK MATERIALS</u> - semi-consolidated to consolidated older alluvial deposits of gravel, sand, silt, and clay (Santa Clara Formation)
	GEOLOGIC CATEGORY C	<u>BEDROCK MATERIALS</u> - hard, stratified to massive, deposits of sandstone, shale, conglomerate, chert, mafic igneous rocks, and serpentine (generally shown as Stable Bedrock-sbr-on Movement Potential Map of Portola Valley)

For further information, see references (3) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) and (17)

* See Geologic and Movement Potential Maps of Town of Portola Valley for location of areas underlain by materials described above; reference (3).

Landsliding

4121 Landsliding is the mass-movement of soil and rock downslope along one or more recognizable slip surfaces; the movement may be rapid (as in rock-falls) or very slow (as in earth flows). In the California Coast Ranges landsliding is a natural and widespread phenomenon occurring on many slopes underlain by relatively unstable rocks and soils. Initiation of movement of a new landslide or reactivation of an existing one may be caused by either natural processes or man's activities. Strength of hillslope materials may be reduced by weathering and decay of rocks and soils, saturation, and strong vibrations. The balance of forces acting on hillslopes, ordinarily in equilibrium, may be upset by addition of weight, removal of lateral support, and seismic accelerations. Man contributes to these processes through excavation, construction, irrigation, and disposal of waste water in septic drainfields. Strong ground motion during earthquakes may initiate new landslides and reactivate existing ones. Studies following larger earthquakes in California demonstrate that landsliding is commonly the most widespread type of earthquake related ground failure.

- 4122 The Geologic Map of Portola Valley shows the location of numerous landslides. Most notably it indicates that more than half of the hillsides in the western portion of the Portola Valley planning area has been subject to landslide activity; some of these landslides are ancient and naturally stabilized; some of them are recent and potentially hazardous; and some are actively moving. The hazard to public and private property as well as to public safety from landslides is clear. Roads and utility lines crossing an active landslide may be blocked or severed. Structures may be damaged or destroyed if encroached on or carried downslope by an actively moving landslide. For further information, see references (3) (7) (15) and (18).

Ground Settlement

- 4123 Ground settlement is the sinking of the surface of the land and is most commonly due to the compaction of unconsolidated granular sediments and soils. Compaction and settlement of such materials is a natural process that ordinarily takes place slowly and imperceptibly. However, the process can be accelerated by loading imperfectly compacted soils with embankments or buildings, by excessive withdrawal of ground water, or by ground shaking resulting from earthquakes. Seismically induced ground settlement or "shakedown" may occur very rapidly. Settlement, particularly when aggravated by human or seismic processes, may be unequally distributed over a small area (differential settlement) with damaging effects to foundations of structures resting directly on the settled ground. Ground settlement during earthquakes has been a major source of property damage in many earthquake-prone regions of the world.
- 4124 Areas within Portola Valley with the highest potential for ground settlement are those shown on the Geologic Map of the Town as alluvium, slope wash, and landslide deposits. However, some areas underlain by other units may also be subject to ground settlement. Detailed site investigations are required to determine local settlement potential. For further information, see references (3) (5) and (15).

Soil Liquefaction

- 4125 Soil liquefaction is the phenomenon in which certain water-saturated soils temporarily lose their strength when subjected to intense shaking and flow as a fluid. Soils most susceptible to liquefaction are saturated, well-sorted, poorly-compacted, fine sands and silts. Substantial damage in California and other areas of the world has been caused by soil liquefaction brought about by earthquakes.

- 4126 Although sufficiently detailed geologic and engineering information to predict accurately sites of soil liquefaction in Portola Valley is not currently available, the possibility of liquefaction in localized areas along the valley floor, underlain by unconsolidated alluvium and a seasonally high water table, is considered to be relatively high.

Flooding

- 4127 In the past, Portola Valley has experienced minor flooding in areas adjacent to streams. These areas include portions of the natural floodplains of Corte Madera, Sausal, and Los Trancos Creeks, and locations where inadequate or obstructed drainage facilities have been unable to contain peak flows. Hydrologic principles suggest that similar minor flooding will recur sporadically and that somewhat more extensive flooding may take place during widely spaced intervals. The Flood Insurance Study for Portola Valley (20) prepared by the U.S. Soil Conservation Service in 1971 focuses attention on Corte Madera Creek and illustrates the potential for local to general overbank flooding for return periods between 10 and 500 years with floodplain water depths of up to 5 feet for the 100 year flood. Inundation by the 100 year flood is indicated for significant portions of the floodplain along Willowbrook Drive and between Westridge and the Town boundary. The Master Storm Drainage Report for Portola Valley (1970) (21) cites a number of existing drainage facilities judged to be inadequate to pass 10 to 25 year flood flows or which are subject to obstruction by debris and which may contribute to local flooding conditions in their vicinity during periods of high runoff.
- 4128 In addition to the periodic recurrence of minor flooding due to intense rainfall, portions of Portola Valley are exposed to the hazard of flooding that may result from seismically induced failure of small dams. Boronda Lake in Palo Alto Foothills Park in the Los Trancos Creek drainage and the small reservoir behind The Sequoias and the Morshead Lake in the Sausal Creek drainage are retained by earthen embankments. Should either of these dams fail during an earthquake some downstream flooding may be expected, although no data are available to assess accurately either the seismic stability of the dams or the potential flood hazard.

For further information, see references (7) and (22).

Erosion and Sedimentation

- 4129 Erosion and sedimentation are on-going natural processes in Portola Valley as they are elsewhere in the world. Factors influencing the rate of erosion at any particular location include climate, weather, rock and soil characteristics, slope,

and vegetation. Erosion occurs chiefly on steeper slopes in the upper reaches of drainage basins where run-off velocities are high. Sedimentation, on the other hand, takes place mainly in the lower reaches of drainages where stream gradients and velocities are reduced. No stream gauging or sediment load data are available for the streams in Portola Valley, but it is apparent that the highest erosion potential is found on the steep slopes descending from Skyline Boulevard to the valley floor. Moderately high erosion potential also exists along some short, steep drainages in the Westridge and Alpine Hills areas.

- 4130 The Report and General Soil Map of San Mateo County (23) revised in 1970 by the U.S. Soil Conservation Service provides a generalized view of the distribution of principal soil associations in the Portola Valley area and the relative erodibility of the soil groups. It assigns a high erosion hazard to the soils on the steep slopes west of the valley floor and a moderate hazard to the foothill areas to the east.
- 4131 Although no detailed studies of erodibility of the various geologic units (and their associated soils) shown on the Geologic Map of the Town have been made, some generalizations are possible. Other factors being equal, surficial deposits of alluvium and slope wash as well as landslide deposits can be expected to be most susceptible to erosion; the beds of the Santa Clara Formation of intermediate erodibility; and the older bedrock units of least, but variable, erosion potential.
- 4132 Throughout much of Portola Valley, and the surrounding area, the combination of natural slopes, soil structure, and native vegetation retard slope erosion to the extent that natural erosional processes on slopes are relatively slow. On the other hand, where natural conditions are disturbed by grading and site development, or poorly controlled animal keeping, erosion can be greatly accelerated and cause damage both to the site where it occurs and downstream where sedimentation of the eroded debris takes place.
- 4133 With the exception of the flood plain of Corte Madera Creek along the Portola Valley-Woodside boundary west of Mapache Drive, few persistent areas of natural sedimentation exist in Portola Valley, most of the sediment produced by erosion being exported by stream flow beyond the boundaries of the Town. Local sedimentation does occur along the main creeks and tributary drainages chiefly where man-made facilities have altered stream flow characteristics. Here, sediment accumulations have partially obstructed a number of culverts and drainage ditches increasing the hazard of local flooding at these points.

For further information, see references (7) and (24).

Expansive Soils and Soil Creep

- 4134 Some soils and bedrock materials in the Portola Valley area swell when they become wet and shrink when they dry, as a result of water adsorption by certain expansible clay minerals they contain. Building foundations bearing on such materials may suffer destructive distortions if not properly engineered.
- 4135 Expansive soils may be encountered anywhere within the Portola Valley area, but they occur most frequently in areas shown on the Town's Movement Potential of Undisturbed Ground Map as expansive soils and bedrock. Individual site investigations and laboratory testing are required to identify expansive soil conditions.
- 4136 Repeated expansion and contraction of soils on slopes results in slow creep of the soil layer in a downslope direction. The expansion and contraction may be caused merely by bulk adsorption and loss of water or freezing and thawing, but soils containing truly expansible clays are subject to pronounced soil creep. Soil creep may exert large enough lateral forces on building foundations to produce significant distortions of the structure or damage to the foundation, if unanticipated in the foundation design. For further information, see references (3), (7) and (23).

Fire Hazards

- 4137 The Portola Valley planning area is served by the Woodside Fire Protection District, the California State Division of Forestry, and Stanford University. Northern and eastern portions of the planning area are also served by the Menlo Park Fire Protection District and the Palo Alto Fire Department. All of these fire protection services fight both structural and non-structural fires, although the equipment operated by the California State Division of Forestry is designed to be most effective against grass, brush, and forest fires, rather than structural fires.
- 4138 A Fire Hazards Map (Appendix 3) has been prepared by the Woodside Fire Protection District for the Portola Valley planning area portion of the District on which are designated areas subject to significant fire hazards. The boundaries are approximate because: 1) they are based on general information and 2) hazards usually increase or diminish gradually rather than abruptly as shown by the lines on the map.
- 4139 The map indicates that except for a few isolated small areas in the developed portion of the Town, the significant fire hazard area is that which lies south and west of Portola Road and south and east of Alpine Road. This includes primarily all of the undeveloped portion of the Town. To varying degrees these areas are considered hazardous based on the following four basic fire safety factors:

1. Water Supply

The basic criterion for judging the adequacy of water supply for fire fighting purposes is:

1,000 gallons per minute for a period of 2 hours, with a residual pressure of 20-lbs/sq. in.

2. Accessibility

The factor of "accessibility" is measured in terms of travel time from a fire station to a potential fire location; it is a measure of the time that a fire-fighting crew will need to get to the fire and start extinguishing it.

3. Land Slope

Land slope influences fire safety in two ways. First, fire tends to spread up steep slopes far faster than it does on level land. Secondly, the slope of the land determines how easy it is to move men and equipment to the scene of the fire.

4. Flammability and Fuel Loading

The term "flammability" is an index of how easily material is ignited, while "fuel loading" is an index of how much material is present to burn. An example of the usage of these terms might be applied to dry grass; it is very flammable, but it has a very light fuel loading and would burn out quickly. On the other hand, a pile of firewood may be very hard to ignite, but, once lit, would burn for a long time. The two factors are considered as a single rating factor in this study.

4140 The following portions of the planning area are not shown on the Fire Hazards Map: the open lands of Stanford University in the northernly part of the planning area including Jasper Ridge Biological Preserve, SLAC, Webb Ranch and the Academic Reserve; the unincorporated area southeast of the Town; and the sparsely developed portions of Santa Clara County including the Palo Alto Foothill Park which occupy the easterly fringe of the planning area. An analysis employing the basic fire hazard factors previously described likely would reveal portions of these areas would be subject to significant fire hazards. When data is available from the responsible fire protection agencies, such data should be referenced herein.

4141 The conclusions drawn from the analysis of fire hazards in Portola Valley are:

1. The relatively level sections of the Portola Valley planning area which have been developed with roads and have good water supply systems are relatively well protected from fire hazards. These areas can be reached quickly by fire fighting equipment, and firemen normally are able to subdue fires in these areas quite rapidly. These lands include those which are not otherwise ascribed hazard designations on the Fire Hazards Map.
2. The sections of the Portola Valley planning area which are in steep hillside terrain, have few roads, and are lacking in water supply, are relatively hazardous when judged from a fire safety point of view. These areas cannot be reached quickly by fire fighters, and when they are reached, fire fighters may have substantial difficulty in fighting the fire because of difficulty of movement, dependence on hand carried equipment, and lack of water. These lands are clearly the most hazardous in the planning area. For further information, see reference (25).

POLICIES

4142 The following policies are intended to guide the Town and private parties in future actions.

4143 1. Policies Concerning Fault Displacement Hazards

- a. Consider all faults shown on the map "Fault Lines Mapped by W.R. Dickenson, November 1971" (2) and "Special Studies Zones Maps" (4), as each may be amended, as active faults, unless and until evidence to the contrary is developed through field investigations.
- b. Locate structures for human occupancy appropriate distances from fault traces shown on the map "Fault Lines Mapped by W.R. Dickenson, November 1971" (2), as may be amended. Specify in Town regulations appropriate distances from each type of fault trace, and establish procedures for bringing about compliance with this policy.
- c. Subdivisions, structures, or other developments within the special studies zones shown on the maps "Special Studies Zones Maps" (4) should at a minimum comply with pertinent State regulations.
- d. Design and construct new roads, bridges and utility lines (either public or private) that cross active fault traces in a manner which recognizes the hazard of fault movement. Such designs should consider that

there is a possibility of a 20 foot right-lateral displacement on the Woodside and Trancos traces of the San Andreas Fault. Equip water, gas and electric lines that cross active fault traces with shut-off devices which utilize the best available technology for quick shut-off consistent with providing reliable service.

- e. Examine all existing utility lines that cross active fault traces to determine their ability to survive fault movement (in the amount described in paragraph d. above). Utility companies should institute orderly programs of installing shut-off devices on these lines, starting with the lines that cross the Woodside and Trancos traces and those which serve the most people. Consider above-ground crossing of fault traces where continued service and safety cannot be assured for subsurface lines. Establish and maintain adequate emergency water supplies in areas served by water lines which cross active fault traces.
- f. Consider fault traces such as those of the Pilarcitos Fault, and the unnamed fault that trends past Searsville Lake along Bear Creek (26), and others shown on the Geologic Map of the Town as inactive, in the review of applications for the construction of buildings for human occupancy, site development, land divisions, and subdivisions. Appropriate geological investigations should be made and reviewed to determine the fault location and characteristics prior to the approval of any such applications.

4144 2. Policies Concerning Ground Shaking Hazards

- a. Design and construct critical facilities in the Portola Valley planning area to withstand the "maximum probable" earthquake and remain in service.
- b. Review the structural integrity of all existing critical facilities in the Town and strengthen, remove or replace those which are found to be unable to meet Policy a. above.
- c. Design and construct structures for human occupancy to retain their structural integrity when subjected to the anticipated shaking from a "maximum probable" earthquake. Place emphasis on seismic design and seismic bracing systems. Where deemed appropriate by the Town, designs shall be reviewed by a structural engineer.

- d. The Town of Portola Valley endorses the review and updating of the Uniform Building Code (which the Town has adopted by reference), with the objective of adding to it revisions which reflect information gained from the 1971 San Fernando and other recent earthquakes.

4145 3. Policies Concerning Landslide Hazards

- a. Review all proposed developments with respect to the "Geologic Map" and "Movement Potential of Undisturbed Ground" map (3) of the Town. Require geologic and soil reports for all significant development of all areas shown as landslides. Reports should be responsive to the information indicated on these maps.
- b. Locate structures for human habitation and most public utilities so as not to risk other than minimum disturbances from potential landslides. Give due consideration to mitigating measures, based on geologic and other reports acceptable to the Town, which can be taken to reduce the risk from seismic and non-seismic hazards to an acceptable level (as defined in Table 1 and related text).
- c. Where roads or utility lines are proposed to cross landslide areas, for reasons of convenience or necessity, they should be permitted only if special design and construction techniques can be employed to assure that acceptable risk levels will be met.
- d. Adopt implementing policies and/or regulations which are consistent with Policies a.-e. above and which will help assure that any failures of ground due to landslides will not endanger public or private property beyond levels of acceptable risk defined in this element.

4146 4. Policy Concerning Ground Settlement

- a. Consider those areas shown on the "Geologic Map" (3) as alluvium, slope wash, or landslide deposits, to be areas of potential ground settlement and require detailed site investigation of this potential. Address potential for settlement in other locations in routine site investigations.

4147 5. Policy Concerning Soil Liquefaction

- a. Consider the possibility of soil liquefaction in site investigations in connection with applications for development, especially in areas along the valley floor underlain by unconsolidated alluvium and a seasonally high water table.

4148 6. Policies Concerning Flood Hazards

- a. Review all applications for subdivisions, building permits and other similar approvals in the vicinity of major drainage channels with respect to potential flooding.
- b. Do not erect structures in areas determined to be subject to "100 year floods" unless appropriate measures will mitigate potential adverse effects on the structures and nearby properties. Minor structures where there is no threat to life and little threat to property may be excepted.
- c. Rely upon maps accompanying the Flood Insurance Study, Portola Valley (20), until superseded by more accurate maps, to define the "100 year flood" area along the relevant portion of Corte Madera Creek unless professionally prepared hydrological reports indicate that the subject site is not within an area which is subjected to "100 year floods."
- d. Replace or improve existing drainage structures such as culverts and pipes deemed to be inadequate to meet acceptable standards.
- e. Do not erect structures which will impede the flow of flood waters in a flood channel.
- f. Encourage owners of buildings which are in flood-prone areas to take appropriate measures to reduce the likelihood of flood damage to their property. Control any such measures so as to not increase the flood or erosion hazards to other properties.
- g. Maintain appropriate vegetation on the terrain in the Portola Valley planning area to minimize run-off of rainfall, consistent with other safety practices.
- h. The Town intends to continue to participate in the Federal Flood Insurance Program and recommends that the Federal Insurance Administration expedite completion of maps which will indicate the areas in Portola Valley which are subject to "100 year floods."

- i. When more accurate maps are available indicating areas within the Town which are subject to "100 year floods" the Town should amend its codes and ordinances so as to prohibit construction which would be hazardous to life or property in these areas, or would adversely affect the flow of storm waters.
- j. When the State required flood inundation map for Searsville Dam is available, it should be used in reviewing land uses proposed in the General Plan for affected downstream areas.

4149 7. Policy Concerning Erosion and Sedimentation

- a. Maintain natural slopes and preserve existing vegetation especially in hillside areas. When change in natural grade or removal of existing vegetation is required, employ remedial measures to restore or provide appropriate vegetative cover and to control storm water runoff. Give special attention to minimizing erosion problems resulting from the keeping of animals. In specific application these policies will be tempered by needs for fire safety.

The Town currently administers the provisions of the subdivision ordinance concerning landscaping and erosion control, and the provisions of the site development ordinance concerning grading, giving special attention to the protective measures which are appropriate prior to the advent of seasonal rains.

4150 8. Policy Concerning Expansive Soils and Soil Creep

- a. In areas where information available to Town officials indicates the probability of expansive soils or soil creep, soils reports should be submitted in connection with all applications for development. In those instances in which expansive or creep soils are reported, measures as are necessary to mitigate the probable effects of this hazard will be required.

4151 9. Policies Concerning Fire Hazards

- a. Do not construct buildings for human occupancy, critical facilities, and high value structures in areas classified as having a high fire risk, unless it is demonstrated that mitigating measures will be taken which will reduce the fire risk to an acceptable level.
- b. Prior to the approval of any subdivision of lands in an area of high fire risk, the Planning Commission should review the results of a study which includes at least the following topics:

- 1) the costs and means of providing fire protection to the subdivision, and
 - 2) an indication of who pays for the costs involved, and who receives the benefits.
- c. Provide adequate clearance around structures to prevent spread of fire by direct exposure, to assure adequate access in times of emergency and for the suppression of fire.
 - d. In locations identified as presenting high fire hazard, require special protective measures to control spread of fire and provide safety to occupants, including, but not limited to, types of construction and use of appropriate materials.
 - e. When reasonable and needed, make privately owned sources of water, such as swimming pools, in or adjacent to high fire risk areas, accessible to fire trucks for use for on-site fire protection.
 - f. Establish street naming and numbering systems to avoid potential confusion for emergency response vehicles.
 - g. Design and permit all private roads for unrestricted access to all Woodside Fire Protection District equipment.

EMERGENCY PREPAREDNESS

Preparation for Emergencies

4152 Effective response to emergencies requires that in advance of need, emergency services be organized and necessary physical facilities be provided. Areas of concern include:

1. Fire fighting and rescue
2. Law enforcement
3. Medical services
 - a. trained personnel: first aid, nurses, doctors
 - b. ambulance service
 - c. availability of hospitals
 - d. stockpiling of medical supplies
4. Availability of emergency shelter
5. Provision of emergency food supplies

6. Communications networks
 - a. emergency services
 - b. citizen information
7. Public utilities
8. Transportation facilities
9. Evacuation routes to undamaged areas

- 4153 The Town program for emergency and disaster response should continue to give specific consideration to both the general nature of hazard exposure in the planning area and specific steps that can be taken in advance of natural disaster to facilitate emergency response.
- 4154 Emergency response measures for the Town of Portola Valley are set forth in the Portola Valley Emergency Preparedness Program (27) (a cooperative program with the San Mateo County Office of Emergency Preparedness, with support from the State of California Office of Emergency Preparedness).
- 4155 Emergency preparedness planning for the Portola Valley area is based on the premise that local emergencies will be dealt with quickly and effectively by local forces, such as local fire protection services, the County Sheriff, and local health services. The assumption is also made that any major disaster or emergency will require outside assistance, from nearby cities, the County, the State, or from Federal sources.
- 4156 Portola Valley is aware that if an emergency situation affects a wide geographical area (as an earthquake might), that the densely populated areas will probably receive aid first, and that rural areas, such as Portola Valley, will receive lower priority attention. For this reason, residents of the Portola Valley area need to keep an adequate supply of food, water, and medical supplies available, sufficient to sustain them for considerable time after a disaster.
- 4157 Policies Concerning Emergency Preparedness
1. Interstate 280 and the arterial roads shown in the Circulation Element of this General Plan are established as "evacuation routes" that will be utilized in the event of emergency.
 2. The Town recognizes the need to have roads of adequate capacity for use in times of emergency. The Town has adopted specific standards for road design, including standards for road width, grade, and alignment that it finds to be appropriate for the movement of emergency equipment.

3. The Town recognizes the necessity of having emergency evacuation routes unimpeded by structures near the traveled way, by narrow bridges, by low overhead signs, or by trees that would block the passage of vehicles in time of emergencies. It is therefore Town policy to maintain emergency evacuation routes (described in paragraph 1 above) in usable condition. The town has adopted zoning regulations and a building code which set forth minimum distances around and between structures.
4. Design and construct subdivisions and other developments in the Portola Valley planning area in such a manner that levels of "acceptable risk" are not exceeded, and that built-in "mitigating measures" are taken. This includes the provision of adequate water supplies, roads which are suitable for the safe passage of emergency vehicles, and adequate street-name signs.
5. The Town of Portola Valley supports a program to identify existing hazards and reduce the risk from them. Risk reduction includes measures to improve water supplies, to provide emergency "escape routes" in areas of high risk, to provide legible road signs and other appropriate measures.
6. The Town of Portola Valley supports measures to increase the ability of local fire, police, and health forces to deal with emergencies as they arise, within affordable economic cost.
7. The Town of Portola Valley will continue its cooperation with County, State, and Federal agencies in emergency preparedness measures, and in mutual assistance programs.
8. The Town of Portola Valley recommends that residents of the Portola Valley planning area keep on hand supplies of food, water, and medical supplies that will be sufficient for their needs for several days in the event of disaster.
9. The Town endorses, and will continue to participate in, public information programs which will assist local residents in coping with local emergencies that arise from time to time (such as the need for fire protection, or emergency health services), as well as being prepared for possible major disasters.
10. The Town recognizes the necessity of having an adequate water supply for fire fighting purposes; it is Town policy that as lands within the Portola Valley planning area are developed that they be provided with an adequate water supply. More specific standards for water flow, water pressure, and water availability for fire fighting are set forth in Town regulations.

GENERAL POLICIES FOR IMPLEMENTATION

- 4158 The preceding pages contain recommendations for avoiding or mitigating the hazards that have been identified. Many of the measures that might be taken to mitigate the hazards cited in this element could produce results in conflict with other elements of the General Plan. Just because natural hazards can be mitigated does not mean that in all cases they should be, especially if such action would produce results which are in conflict with the Conservation Element, the Land Use Element, the Open Space Element, or other sections of the General Plan.
- 4159 For example: given a tract of land in the hillside areas of Portola Valley that is afflicted with several small landslides, and is in an area with very poor fire protection. Merely because the hazards of landslide and fire can be reduced to an acceptably low level of risk does not mean that the Town should approve the building of a subdivision there. Before any decision is made on the matter, the Town should consider carefully the costs and the benefits of such hillside development, both immediate and long range, and then judge whether or not the public interest would be best served by the approval of the proposed land development.
- 4160 In translating the policies of this element into specific regulations, particular care should be taken to:
1. Define the scope of "mitigating measures" that should be taken for each hazard and each land use.
 2. Provide for a means by which the data from which the policies in this element were derived can be updated or superseded as more accurate or more precise data becomes available.

CONSERVATION ELEMENT

INTRODUCTION

4200 The Conservation Element provides a programmatic approach for the conservation, development and utilization of natural resources. Some aspects of conservation programs can be accomplished solely through public efforts while others can only be effectuated by identifying self interests or appealing to the community spirit of the owners of private property within the Town. This element is concerned with programs, requiring both public and private action, which will conserve and enhance the natural qualities of the planning area.

4201 The conservation program areas included in this element concern four basic categories: water - creeks, ponds, and ground water; vegetation - both native and exotic; soils and geology; and wildlife. The "Objectives" of these categories, defined in this element, provide the basis for the conservation programs.

4202 The effective conservation, development and utilization of natural resources cannot be accomplished without professional study and evaluation of critical areas or needs. The Conservation Element generally describes those fragile areas of the ecosystem that must be protected. It provides, in addition, policies that will help ensure that in planning and development of specific land use proposals environmental impact is not overlooked, that conservation actions are considered, and that such evaluations and actions are sufficiently comprehensive in accordance with professionally established guidelines.

Definitions

4203 Public Conservation Programs include those programs that make use of the regulatory power available to the Town and other public agencies, i.e., zoning, subdivision, and site development ordinances. Also included are those educational, technical assistance, incentive, acquisition and protective work programs that can be pursued by public agencies.

4204 Private Conservation Programs include protective work programs sponsored by private organizations and individual efforts for the conservation of natural resources on private sites. Private groups can, through the dissemination of conservation information, educate those unaware of environmental problem areas and, more importantly, values to be conserved. In addition, private dedication of conservation easements and/or financial donations for the protection of the natural processes would enhance all conservation efforts.

4205 For the objectives of the Conservation Element to be implemented, public and private efforts cannot be carried out in isolation of each other. It is the purpose of this element to provide a unified framework for the achievement of the conservation objectives.

- 4206 The Conservation Element includes: objectives, principles, and standards; and a description of programs.
- 4207 Those areas of conservation that have been defined in geographic location and physical extent, such as fault traces, stream channels, and unstable land are to be represented on a plan diagram.* They indicate general areas of concern and are not meant to delimit precise locations. As specific conservation programs are implemented, areas of responsibility for each program will be established. An example of this is fault line zoning. As additional information becomes available, other conservation areas will be represented on the plan diagram and new program areas may evolve.

OBJECTIVES

- 4208 1. Water - Creeks, Ponds and Ground Water
- a. To protect the area against excessive storm water runoff and flooding, erosion, and other related damage.
 - b. To protect natural ground water recharge areas.
 - c. To maintain standards to insure a high water quality.
 - d. To preserve the natural character of all watershed land.
 - e. To prevent obstructions to the natural flow of water that would adversely affect natural processes.
- 4209 2. Vegetation - Both Native and Exotic
- a. To minimize disturbance of the natural terrain and vegetation.
 - b. To preserve and protect all native and naturalized plants with special attention to preservation of unique, rare or endangered species.
 - c. To encourage the planting of native plant species in any site development for ecological, aesthetic and water conservation purposes.

* Due to the fact that much of the information that will affect the plan diagram of the Conservation Element is in preliminary form, a useful diagram cannot be completed at this time. When this information has been fully reviewed and finalized (see the appendix, Conservation Element Work Program), the Conservation Element plan diagram should be prepared.

- d. To ensure that when changes in natural grades or removal of existing vegetation is required on any public or private project, remedial measures call for the restoration or introduction of native vegetative cover.
- e. To ensure that all thoroughfares and local roads are so designed and planned to preserve the natural beauty and character to the maximum extent possible.
- f. To encourage the planting of native trees and shrubs to provide a substantial buffer between the roadways and adjoining properties in harmony with the general character of the Town.

4210 3. Soils and Geology

- a. To prohibit the quarrying of rock, sand and gravel, as such uses are incompatible with basic Town objectives.
- b. To prevent, control and correct the erosion of soil.
- c. To prohibit the dumping of any waste material that may harm or destroy soil quality and character.
- d. To encourage wise soil husbandry and soil enrichment with organic wastes and other soil building materials.
- e. To limit, and where determined necessary for public safety, prohibit development in hazardous geologic areas.

4211 4. Wildlife

- a. To ensure that in the design and construction of public and private developments, the habitat of all wildlife will be protected to the maximum extent feasible, with special emphasis on protecting the habitat of any endangered species.
- b. To maintain clear and free access for wildlife to and from water, food and breeding areas.

PRINCIPLES

4212 1. Water - Creeks, Ponds and Ground Water

- a. Environmental impact statements, prepared professionally, should be required of public and private projects that propose extensive grading or vegetation removal on important watershed lands.
- b. Dumping of waste materials into creeks or streams or within their established undeveloped flood plains (drainage basin) should be prohibited.

- c. Environmental impact statements, prepared by a qualified hydrologist-geologist, should be required of all proposed significant alterations of stream channels or obstructions to the natural flow of water.
- d. The natural flow of streams should be maintained and not diverted for other uses.

4213 2. Vegetation

- a. Removal of all vegetation should be minimized, and where necessary, replanting required, to maintain soil stability, prevent erosion, and to maximize reoxygenation.
- b. Forest resources should be protected from harvesting.

4214 3. Soils and Geology

- a. Zoning and other land use regulations should be used to limit, and in some cases prohibit, development in geologic hazard areas. The degree of development limitation provided for in such regulations should be commensurate with the degree of hazard involved and the public costs likely to be incurred if emergency or remedial public action becomes necessary in these areas.

4215 4. Wildlife

- a. An environmental impact study, prepared by a qualified biologist, should be required to determine if the habitat of wildlife is being encroached upon, particularly of endangered species, by any proposed public or private project where such encroachment appears likely.
- b. All subdivision and site development proposals should be reviewed to ensure that they do not obstruct wildlife access to important water, food and breeding areas.

STANDARDS

- 4216 Establishment of specific standards, where applicable, are included as part of the conservation work program. See Appendix 1 Conservation Element Work Program.

DESCRIPTION

- 4217 Several conservation program areas are proposed. Each program area is based on conservation of the natural processes, or

public health and safety considerations. Specific recommendations made are directed at the objectives of the four categories of concern: water -- creeks, ponds and ground water; vegetation -- both native and exotic; soils and geology; and wildlife.

4218 The program areas proposed are not meant to be the basis for the establishment and implementation of specific conservation programs in isolation of one another. They provide, rather, a unified framework for inter-relating action programs, projects, and other actions to ensure that conservation efforts will be of maximum efficiency and effectiveness.

4219 Each program area proposed could be designated as the responsibility of either the public or private sector; however, it is necessary for program implementation that all programs are understood and supported by both sectors. Further, conservation is dependent upon each individual's realization of his intimate relationship with the environment. All the public efforts are of limited value without total citizen involvement in protecting the environment.

Education

4220 Public education/information programs detailing conservation values and problem areas and providing guidance of protective actions should be organized and administered by Town staff and elected and appointed officials in cooperation with schools at all levels. This would include, in addition, special public meetings, and information sessions with established private clubs or groups. Private conservation groups like the Sierra Club or the Audubon Society can also play an important part in citizen education.

Regulation

4221 The natural character of Portola Valley can be conserved in large part by ensuring that new and existing development is controlled by suitable regulation -- mainly zoning, subdivision, and site development regulations. These regulations are applied by the Town as part of its "police power," the right of government to enact laws which are in the public interest and which are directly related to the health, safety, and general welfare of the community. Ordinances adopted in 1967 seek to preserve the natural setting. The zoning, subdivision, and site development regulations provide much of the framework within which the Town will develop and are sufficient to achieve many of the objectives of the Conservation Element by ensuring dedication of conservation easements and careful siting of development. The regulations should be broadened to include control over the use of natural hazard areas. These regulations will only achieve the objectives with careful and imaginative guidance by Town staff, elected representatives and citizens.

Acquisition

- 4222 There are cases where regulation will not provide a basis for achieving conservation objectives, in these situations a Town program for acquisition is available in the adopted Town "Open Space Program." There are two basic types of land ownership -- full or fee title, and partial title such as through a conservation easement or ownership of development rights. For a full discussion of acquisition see Section b. Other Approaches, Methods of Implementation, Portola Valley Open Space Program, May 1969.

Incentives

- 4223 Incentives, for the most part, have been mainly private -- the concern of the conservationist, of the nature lover and of the sportsman. For effective conservation of natural resources, a program of public incentives should be considered. Incentives in the form of tax relief or some other financial form (e.g., Williamson Act, income tax allowance for gifts, etc.) could be used for the conservation of large areas critically important to natural processes. Changes in this type of incentive would require a higher level of public involvement (state and federal legislation) to enable flexibility at the local level. The Town has already adopted policy in favor of such incentives now permitted at the local level. Incentives could also take the form of allowing modification of normal regulations for special conservation considerations by the property owner or developer.

Technical Advice

- 4224 Professional technical advice is essential for full understanding of the natural processes. A system for the accumulation of all relevant information, and sources of advice is an essential part of the overall conservation program. This information will guide public decision makers and should be available to the private sector for both education and advice. Information on professional services available and sources of professional advice including county, state and federal agencies, professional societies, conservation groups and appropriate local professionals (e.g., landscape architects, geologists, biologists and hydrologists) could be made available at the Portola Valley branch of the County Library and through public schools within the Town as well as at the high school and community college levels.

Remedial Work Programs

- 4225 Remedial work programs directed at specific conservation problem areas can prevent irreversible damage to the environment. Also, programs requiring organized private group efforts, clean up campaigns, etc., can help to improve the environment and bring people together in a common effort.

Miscellaneous Private Efforts

- 4226 For the conservation program to be effective, individual, unorganized private efforts are necessary. These efforts include individual lot maintenance to high standards based on the preservation of the natural character (e.g., care in controlling site drainage, use and control of exotic plants to prevent widespread weed growth, etc.), dedications of conservation easements, and financial donations with the requirement that they be spent for the protection of the natural processes.

NOISE ELEMENT

INTRODUCTION

4300 The Noise Element establishes policies for the preservation of tranquility within the Town consistent with its rural character. Certain of these policies must be considered in conjunction with various aspects of the Land Use and Circulation Elements, e.g., some situations may require the weighing of certain principles of this element against conflicting principles of the other elements. More specific information, designed for implementation of the provisions of this element, appears in Appendix A1-4300.

4301 General Objectives

1. To maintain an acoustical environment in harmony with the pastoral nature of the community.
2. To provide peace and quiet for the enjoyment and self-renewal of the Town's residents and visitors.
3. To preserve for the residents of the Town a sense of privacy attainable only in the absence of intrusions by unwarranted noise.

General Description

4302 Although no federal or state highways pass through the Town, motor vehicles constitute the primary source of noise pollution. Outside the Town boundaries, but within its planning area, lie two major traffic arterials: a portion of the Junipero Serra Freeway (I 280) and a portion of Skyline Boulevard (State Highway 35). In 1969, a major jet noise burden was placed on the Town as the result of an FAA air corridor revision; the condition was rectified in 1971, however, and the situation has remained stable. Private airplanes and police helicopters, however, remain as significant sources of aircraft noise. Non-transportation sources constitute another noise source category, with barking dogs as the primary irritant. Because of the low volume of traffic within the Town, as well as the absence of industrial activity, ambient noise levels lie in the 35-40 dBA range both day and night. (see Appendix A1-4300).

MOTOR VEHICLE NOISE

4303 Objectives

1. To minimize noise levels produced by general traffic.
2. To virtually eliminate noise from unnecessarily loud motor vehicles.
3. To encourage the use of quieter forms of transportation.

4304 Principles

1. The noise generated by a motor vehicle under acceleration considerably exceeds that corresponding to constant speed operation; hence, roadway configurations that interfere with constant speed operations (such as sharp curves and certain traffic control devices) are to be minimized.
2. The noise generated by a motor vehicle operating on a steep grade considerably exceeds that corresponding to operation on a level roadway; hence, traffic on steep grade routes is to be minimized.
3. The noise generated by a motor vehicle traveling on a rough surface considerably exceeds that generated by the vehicle traveling on a smooth surface; hence, smooth roadway surfaces are greatly to be preferred over rough surfaces.
4. Motor vehicles with defective or modified exhaust systems may generate noise levels considerably greater than those generated by corresponding vehicles with stock exhaust systems in good working order; hence, state laws limiting motor vehicle noise emissions are to be vigorously enforced.
5. For a given type of vehicle, quieting systems vary greatly from one vehicle to another; hence, the quietest possible municipal service vehicles (vehicles such as school buses and garbage trucks) are to be utilized.
6. Attractive and convenient alternate forms of transportation encourage their use; hence, an extensive bicycle route system should be developed and a public transportation system should be considered.
7. Excessive noise has a significant impact upon livability in residential area; hence, the construction of housing in "heavy" or "medium" noise impacted zones (see Appendix A1-4300) is to be discouraged.
8. Hourly and daily traffic counts for primary traffic routes facilitate rational assessment of traffic noise impact; hence, such counts should be performed on a timely basis.

Description

4305 Relative to generally accepted criteria for the assessment of traffic noise impact on adjacent land use, residential areas along Alpine Road, Portola Road, Westridge Drive, Los Trancos Road, Golden Oak Drive and Cervantes Road are now measurably impacted by motor vehicle noise pollution (see Appendix A1-4300). Typical regions of impact extend 300 feet in either direction from the centerlines of these roadways, with some regions

extending as far as 800 feet. In addition, land areas adjacent to the Junipero Serra Freeway and Skyline Boulevard are impacted as far as 3,200 feet and 560 feet in either direction from their centerlines respectively (see Appendix A1-4300). The remainder of the land area in the Town is not significantly impacted by motor vehicle noise. Under the assumptions (1) that traffic volumes in the Town will increase at a rate of approximately 2 percent per year, (2) that existing state law (or a pre-emptive federal version thereof) will reduce individual vehicle noise emissions an average of 10 decibels during the next 15 years, and (3) that statutory limits on motor vehicle noise emissions will henceforth be effectively enforced, existing traffic noise impacts in the Town should diminish gradually to minor proportions by 1990. This conclusion generally holds outside the Town boundaries also, except for the land adjacent to the Junipero Serra Freeway; unless noise barriers are constructed along this freeway, large areas of this land will remain severely impacted.

AIRCRAFT NOISE

4306 Objectives

1. To minimize noise levels produced by commercial, private, military and police aircraft.
2. To eliminate the operation of private aircraft at illegal altitudes.

4307 Principles

1. The Federal Aviation Administration establishes flight corridors for commercial aircraft operations; hence, communication with the FAA for the purpose of minimizing the noise impact of commercial aircraft operations should be maintained (see Appendix A1-4300).
2. The illegal operation of private aircraft at altitudes lower than 1000 feet above the local terrain can effectively be curbed only by identification and reporting of aircraft in violation; hence, the Town should continue to urge the FAA to adopt and maintain regulations for small aircraft so as to make the identification of violators increasingly practical (see Appendix A1-4300).
3. The police helicopters utilized by the San Mateo County Sheriff's Department are not as quiet as they might be; hence, the Town should urge the county to utilize the quietest police helicopters consistent with current technology.

Description

- 4308 The Town has little direct control of aircraft operations that may constitute a noise burden to its residents. Hence, most aircraft noise abatement measures must necessarily be effected by seeking cooperation from other government entities.

STATIONARY AND QUASI-STATIONARY NOISE SOURCES

4309 Objectives

1. To minimize noise levels generated by powered equipment.
2. To virtually eliminate excessive noise from sources other than powered equipment.

4310 Principles

1. Educational programs designed to inform and sensitize people concerning their neighbors' rights of tranquility and privacy are to be encouraged.
2. Educational programs designed to inform people of the health hazards associated with noise devices are to be encouraged.
3. The operation of noisy devices during periods in which quiet is especially desired is to be discouraged (see Appendix A1-4300).
4. The use of noisy powered toys (such as powered model airplanes and minibikes) is to be discouraged (see Appendix A1-4300).
5. Dog owners are to be urged to control the barking of their dogs (see Appendix A1-4300).
6. The need for a comprehensive noise ordinance is to be reviewed periodically.

Description

- 4311 Noise from stationary and quasi-stationary sources is not a serious problem in the Town. Numerous cases involving such sources arise each year, however, that often leads to strained relations among neighbors (see Appendix A1-4300). The Town has no noise ordinance, relying instead upon persuasion, warning and, if necessary, disturbing the peace and nuisance laws for control.

PART 5 - COMPREHENSIVE PLAN DIAGRAM

5000 the Comprehensive Plan Diagram is found in Pocket 1 following Part 6.

PART 6 - SUB-AREA PLANS

- 6000 The plans for sub-areas included in this part are intended to amplify and augment the policies and proposals included in Parts 1 through 5. Where a sub-area plan differs in detail from Parts 1 through 5, the sub-area plan is intended to control and supersede the specific proposals in Parts 1 through 5 applying to the sub-area. However, the sub-area plan is not intended to supersede general Town-wide policy set forth in Parts 1 through 5.
- 6001 Each sub-area plan includes text and a plan diagram indicating the area covered and the proposals and policies for development. Each sub-area plan is identified by a title descriptive of the area covered by the plan.

NATHHORST TRIANGLE AREA PLAN

INTRODUCTION

- 6100 The Nathhorst Triangle Area Plan deals with one sub-area of the Town. While basic policy affecting the setting for the Nathhorst Triangle Area (NTA) is found elsewhere in the General Plan, the most detailed proposals for this area are found in this sub-area plan. To obtain the fullest understanding of the Town's policy for the development of the NTA, reference should be made to this sub-area plan, other pertinent parts of the Town General Plan, and to Appendix A1-6100 for pertinent references to planning regulations. Background studies are on file with the Town. Studies of particular relevance to population and commercial acreage projections include "Nathhorst Triangle Area, Preliminary Design Study for the Town of Portola Valley, January 17, 1967" and memorandum to Planning Commission from Town Planner, "Subject: A-P Zoning District Regulations", August 28, 1970.
- 6101 The plan includes: Objectives, Principles and Standards; Description; and the Plan Diagram.

Planning Area

- 6102 This sub-area plan includes all land bordered by Alpine Road, Portola Road and Nathhorst Avenue, plus adjoining related lands as shown on the plan diagram. The planning area includes lands proposed for commercial and service activities serving the Town, public uses serving the Town, and adjoining related lands. The area is sufficient, when combined with the other commercial area in the Town, to meet the needs of the Town for local goods and services when the Town is completely developed in conformance with the General Plan.

General Goal

- 6103 The plan is intended to guide, unify and enhance, both functionally and aesthetically, the development of the separately owned private properties in coordination with public spaces and facilities, roads, trails and paths.

6104 OBJECTIVES

1. The Nathhorst Triangle Area shall be developed as a focal point for businesses and institutional type uses serving the residents of Portola Valley and its spheres of influence and as an informal social gathering place.
2. The development of the NTA shall result in a unified commercial-institutional complex with a scale and design quality compatible with the rural setting of the Town.

3. The NTA shall be served by a system of roads, paths and trails that provide for safe, convenient and enjoyable access to, from and through the area.

PRINCIPLES

- 6105 1. In order to serve as a community focal point, the NTA shall provide space for:
- a. Convenience, goods and services and limited shopping goods.
 - b. Offices for businesses serving the community.
 - c. Institutional uses such as churches, a fire station, and similar uses.
 - d. Those facilities which tend to bring people together informally such as an outdoor cafe and sitting areas.
- 6106 2. In order to meet desired design objectives:
- a. Growth shall be orderly and ultimately uninterrupted along property lines between commercial uses.
 - b. Non-residential uses shall not adversely affect nearby residential property. Noise, sight, odor and other nuisances shall be held to a reasonable minimum.
 - c. Excessive grading shall be avoided and attractive natural features such as the creek shall be preserved and enhanced.
 - d. Structures shall be designed so that all sides are attractive.
 - e. Parking lots shall permit convenient automobile movement, parking, and access to facilities, avoiding unduly large, inefficiently arranged paved areas and avoiding automobile conflict with pedestrians, bicyclists and equestrians.
 - f. Service areas shall be segregated from other areas, and trash containers shall be screened. Equipment noises and emissions shall be minimized.
 - g. Fire hydrants and good circulation for fire protection shall be provided as needed.
 - h. Electric and telephone services shall be underground.

6107 3. In order to provide desired circulation:

- a. Nathhorst Avenue may need to be widened to serve new uses.
- b. Alpine and Portola Roads may need to be widened where turning lanes are required.
- c. Safe vehicle ingress and egress shall be accomplished by limiting points of access to public roads.
 - 1) Driveway entrances serving different property owners shall be combined at common property lines when serving non-residential uses.
 - 2) Driveways shall be a minimum safe distance from road intersections as determined by Traffic Safety Standards.
 - 3) The preferred access to corner properties with Nathhorst Avenue frontage shall be from Nathhorst Avenue.
 - 4) Easements and/or mutual use agreements may be required among the various property owners to connect driveway entrances in order to facilitate off-street circulation and reduce the number of driveway entrances required.
- d. Safe pedestrian and bicycle access to and inter-communication among non-residential developments shall be provided.
 - 1) Separate pedestrian and bicycle paths, preferably separated from public roads, shall be installed in the front setbacks or road rights of way along Alpine and Portola Road frontages.
 - 2) Safe paths between the roadside and on-site improvements shall be required and compatible developments shall be interconnected.
- e. Safe horse trails, separated from paths and roads shall provide access to and through the NTA providing access to uses suitable for equestrians while assuring compatibility with land uses in the area.

STANDARDS

- 6108 Standards for development should be set forth in the Town zoning, subdivision and site development regulations.*

DESCRIPTION

- 6109 The plan sets forth a framework for the development of the NTA within which considerable latitude exists for design and development of individual properties. The basic distribution of land uses and key circulation features are set forth as controlling elements. Imaginative design on individual properties woven into the overall framework can produce a splendid center for the Town. While the objectives, principles and standards set forth in the preceding sections are the guiding statements for future development, the plan diagram, when viewed in the context of this description, should convey an understanding of the type of development the Town is seeking for this area.

Community Commercial

- 6110 The community commercial area is shown in two segments. The largest area is intended to be developed as a community shopping center for the Town. The center is shown as served by two permanent entrances from bordering roads. One temporary entrance is shown as providing interim access if necessary. Internal circulation between parcels is shown diagrammatically and would need to be adjusted to fit specific designs for development. Trails and/or paths run along three sides of the center. It is intended that normal yard setbacks of the zoning ordinance would be reduced or waived as necessary between parcels in the shopping center in order to achieve a unified design. Setback requirements along Portola and Alpine Roads, landscaping and open space requirements, parking requirements, and floor area ratio and height limitations are set forth in the zoning ordinance.
- 6111 In the other community commercial area, which is in the southwest corner of Alpine and Portola Roads, very careful design will be required due to its small size. Design and landscaping will be very important in order to make this corner attractive and to visually integrate it with the other community commercial area.

* The most important and relevant existing and proposed provisions of the zoning ordinance are referenced in Appendix A1-6100.

Community Service

- 6112 The community service areas are intended to provide space for office uses that are necessary to serve the needs of the residents of the Town. These areas are also suitable for institutional uses such as public buildings, churches, etc. Perimeter access by trail and path is proposed to both community service areas. Limited access to Alpine Road is shown with coordinated internal circulation between properties. Setback requirements along Portola and Alpine Roads, landscaping and open space requirements, parking requirements, and floor area ratio and height limitations are set forth in the zoning ordinance.

Community Park, Open Space and Buffer Planting

- 6113 This designation includes portions of parcels shown for community commercial and community service uses, and land within the public right of way at the intersection of Alpine and Portola Roads.
- 6114 The community park at the intersection of Alpine and Portola Roads, Triangle Green Park, has been developed as a fitting landscape design for this important intersection.
- 6115 The existing creek is shown as a major feature of the NTA. Where the creek crosses private lands, it should be planted and located in an open space easement. Structural crossings of the creek should be held to the minimum feasible. Any area on private land proposed for open space land or buffer planting could be counted as part of the required open space for the particular parcel as required by the zoning ordinance. The rear portions of the two corner parcels at Nathhorst Avenue and Alpine Road are appropriate for private open space uses related to the uses on the remainder of the parcels as well as for buffer planting along the property line to the northwest.

Institutional Uses

- 6116 The only institutional land within the planning area is the site for the new fire station. Much of the balance of the NTA area, however, is shown as suitable for low intensity residential or institutional use.

Low Intensity Residential or Institutional Uses

- 6117 The future of this rather large area is difficult to determine because of a variety of factors, including the possible expansion of The Priory toward Nathhorst Avenue, the uncertain future of the school site held by the Portola Valley School District, and uncertainty of need for other institutions to

serve the Town. The plan indicates that these parcels can be used for either residential (1 acre per dwelling unit) or institutional use. It will be important, however, that where residential and institutional uses adjoin, very careful consideration be given to institutional uses to assure a site design which minimizes adverse impact on adjoining parcels. Similarly, any residential use should be carefully designed so as not to be unduly exposed to possible external influences. In further developing residential policy, reference should be made to the Housing Element of the General Plan and relevant population studies.

- 6118 The creek and creekside trees running through the parcel at the northeast side of the intersection of Nathhorst Avenue and Alpine Road, while not shown as having any special design treatment on the plan diagram, should be preserved in a natural state to the maximum extent possible. This creek plus the special building setback required along Alpine Road by the zoning ordinance should help shelter the remainder of the parcel from Alpine Road.

Low-Medium Intensity Residential

- 6119 This area is zoned for single family residential use at a density of 15,000 sq. ft. per dwelling unit. The property from the community commercial area to Canyon Drive is partially developed. It is possible that a planned unit development for single family dwellings might be feasible on this land plus some land to the northwest. Also, institutional uses could be placed on this land.

Streets

- 6120 The plan diagram shows only the street rights of way and does not show paving width or location. These details should be the subject of traffic studies. Paving widths on Nathhorst Avenue should probably be to normal Town standards. Paving widths, on Alpine and Portola Roads, however, will need to be based on careful studies of the needs of these roads. Basically, two lanes for traffic on each of these two roads plus turning lanes should be adequate to handle projected traffic.
- 6121 The plan diagram shows driveway entrances to only a portion of the planning area -- the community commercial and community service uses within the area bounded by Nathhorst Avenue and Alpine and Portola Roads. These points of access are shown to indicate how adjoining properties should share access points in order to minimize driveway entrances on these two busy roads. Minor shifts in location of access points are acceptable if the same mutual access to properties is maintained and traffic engineering aspects are acceptable. Access points to other properties on Alpine and Portola Roads should also be limited.

6122 A possible future street is shown at the bend in Nathhorst Avenue. This street extends up a hill at a slope in excess of 15%. The lands it would serve also have access onto Sausal Drive. As uses are proposed in the area, the wisdom of developing this road will need to be studied. A straight steep road can be hazardous and unattractive. Landscaping and changes in alignment could help the situation. The road would, however, bring increased traffic to the area. One option would be for the road to serve only the lower portion of the hill, with the rest of the hill being served from Sausal Drive.

6123 Not Used.

Pedestrian Paths

6124 Pedestrians should be able to walk to, from and through the NTA on all-weather surfaces. The proposed pedestrian paths plus the bicycle path which should also be available to pedestrians, provide for such circulation. While the steeper pedestrian paths need probably only be built to the usual Town standard of a rock base with oil seal, the more level paths along Nathhorst Avenue, Portola Road, Alpine Road and Canyon Drive should probably have an asphalt surface to permit limited use by bicycles. While the proposed paths have been located with considerable care, slight changes in alignment are to be expected as more detailed plans for developments are prepared.

Bicycle Path

6125 One bicycle path is proposed -- along Alpine and Portola Roads. This path should be built to at least the Town standard width for bicycle paths of five feet, and preferably six feet because it will also serve pedestrian traffic. Where the path serves considerable two way traffic, it should preferably be eight feet wide. In some places the street right of way will probably be wide enough to accommodate the path while in other locations it will need to be located on easements adjacent to the right of way.

Riding Trails

6126 While heavy equestrian use in the area is not anticipated, some provision must be made for horses. The main trails include one along Alpine Road -- Nathhorst Avenue -- Portola Road, and the second one along Alpine Road. The other horse trails consist of connections. The trail for which federal funds were expended at an earlier time follows the north side of Alpine Road, the north side of Nathhorst Avenue and the east side of Portola Road.

Bicycle Lanes

- 6127 Bicycle lanes are shown along the very popular Alpine-Portola Road route used by residents and bicyclists from surrounding communities. These lanes provide for high speed bicycle traffic that would be hazardous on the bicycle paths which accommodate leisurely bicycling and walking. Also, bicycle lanes are shown heading southwest on Alpine Road; these lanes are part of a proposed system destined to link to Page Mill Road.

PLAN DIAGRAM

- 6128 The plan diagram is part of this sub-area plan and is labeled Nathhorst Triangle Area Plan Diagram. The plan diagram is found in Pocket 3 following Part 6.

ALPINE PARKWAY PLAN

INTRODUCTION

The Route

6200 The Alpine Parkway extends along Alpine Road from the base of the foothills at Santa Cruz Avenue, up the the Skyline Boulevard summit, a distance of nearly ten miles. Starting at Santa Cruz Avenue, Alpine Road follows San Francisquito Creek, then, in turn, its tributary, Los Trancos Creek, up to Los Trancos Road. It then crosses through the Nathhorst Triangle Area, and finally joins Corte Madera Creek where it follows the canyon up the mountain to the summit. The route in part follows along the mutual boundary of San Mateo and Santa Clara counties and goes through sections of Menlo Park, Portola Valley and Palo Alto.

Purpose

- 6201 The Alpine Parkway Plan is a schematic guide for the conservation and development of the parkway. The plan--
1. delineates the approximate outlines of the parkway corridor,
 2. includes road, trail and path facilities in general locations,
 3. proposes activities appropriate within the parkway,
 4. identifies particular problems and opportunities regarding the parkway,
 5. suggests some of the values of the parkway to the communities it touches and identifies its importance to the larger mid-peninsula community.
- 6202 In addition to longer range actions, the plan focuses public attention on the actions that can be taken at this time to create the parkway. It also lists measures that can be taken, both public and private, to prevent damage to the corridor by actions that could seriously affect its future value.

Character of the Parkway Corridor

6203 The roadsides and creeksides in the corridor remain in a natural state through much of the route although the lower section of Alpine Road is a busy thoroughfare linking Portola Valley, Ladera and other foothill communities to Midpeninsula employment and shopping centers. Residential properties, shopping centers, and tennis and swim clubs touch the roadway, yet most of the land is still rural in appearance with grassland pastures, rolling oak studded, grass covered hills, and steeper wooded

hill and mountain sides. Low density building, generous setbacks, and the native woods have preserved much of the natural setting and rural feeling. Magnificent stands of trees border the San Francisquito and Los Trancos creeks -- oaks, bays, alders, 75 to 100 feet tall, many of them hundreds of years old. Small open meadows remain in bends of the creeks.

- 6204 The upper reaches of the Corte Madera canyon and the ridges above where the road climbs to the summit are as yet only occasionally touched by development and are still in the wild state. The narrow winding Alpine Road parallels Corte Madera Creek for several miles and overlooks the fern covered banks of this year-around stream. Alpine Road leaves the tight canyon at Joaquin Road, the Vista Verde Subdivision entrance, and climbs to the wooded ridge with views across the canyon to Skyline Ridge and occasional dramatic vistas of the Bay plain.

GOALS AND OBJECTIVES

- 6205 The basic goal of this plan is the conservation and enhancement of the beauty of landscape and the rich variety of plants and wildlife of the parkway corridor so as to maintain this band of pleasant open country for the enjoyment of all. A further goal is to carry local traffic and to provide recreational opportunities utilizing the natural setting with improvements limited to trails and paths and features designed to protect and enhance the natural character and the public safety.

6206 Objectives

1. To establish the San Francisquito Creek system as an important element in the Midpeninsula waterway system.
2. To protect a corridor through this watershed for an Alpine parkway, providing a natural link between the mountains and the Bay plain, to add to the sense of order and well-being of those who live in the Midpeninsula -- with intimate views of the creeks, the sight of rolling hills, and striking vistas of the Santa Cruz Mountains.
3. To utilize the opportunity for creekside recreation along the length of the creeks.
4. To provide a basis for interjurisdictional arrangements needed to protect the corridor and develop the parkway.
5. To provide for the use and enjoyment of the creeks and the valleys and canyons in a manner consistent with preservation of their integrity as natural features.

6. To define a parkway which includes trafficways which will accommodate future increases of local traffic and allow for the preservation and recreational use of the intrinsic qualities of the creeks and creeksides of the San Francisquito Creek system.
7. To retain the natural beauty of the Alpine corridor, a route through which thousands of people travel and will travel daily so that the parkway will continue to provide a welcome contrast with the nearby urban activity centers.

DESCRIPTION

- 6207 The watershed landscape is the unifying element of the parkway. The creek and creekside trees, the valley through which it flows, the canyons, the confining ridges and mountain tops all relate to the watershed of the San Francisquito and its tributaries the Corte Madera and Los Trancos Creeks.
- 6208 A general recognition of the outstanding scenic values of this corridor is assumed. The Alpine Parkway, Phase 1 - basic data report provides much of the background, therefore, this plan does not inventory the striking sequences of vistas and wooded roadsides that the driver experiences, or detail the tree forms, meadows, streams and pools that exist for the enjoyment of the trail user. They are implicit in the plan. A set of slides and photographs, an adjunct to this plan, shows some views typical of the corridor.
- 6209 The parkway is in essence a linear park which includes within it scenic resources, routes of travel, natural preserves, recreation sites and vista points. Two existing public recreation areas are shown: the Ford Park, an essentially open park with a little league baseball diamond, and the soccer field south of Arastradero Road. Also, two existing developed recreation sites and one commercial-recreation facility are recognized in the plan -- the Ladera Oaks Swim and Tennis Club, the Alpine Hills Swim and Tennis Club, and Alpine Beer Gardens at the site of Rosotti's historic monument. No additional "developed" recreation areas are proposed. The parkway corridor includes vista corridors and roadside areas which are specifically identified in order to 1) establish the basis for the regulations appropriate to protect the natural setting of the parkway, and 2) suggest a framework for cooperative community actions that can enhance desirable features or correct undesirable conditions.

The Creeks

- 6210 Although much of the parkway corridor is within the Town of Portola Valley, this scenic route is also of vital interest to

the larger Midpeninsula community. Of prime concern are the creeks which form the common boundary of San Mateo and Santa Clara Counties. These creeks are not, throughout their length, "wild" in the sense of remaining free flowing and unaltered by man, but they are largely unspoiled and offer unparalleled opportunities along their banks for recreation, education and enjoyment. They are a resource of great value, of a kind that is fast disappearing in our urban area. Therefore, these creeks and their immediate banks, including the well-defined band of trees along the creeksides and a suitable minimum width (at least 200') on either side of the creek, comprise a natural resource area which should be protected through public acquisition, stringent regulation and other appropriate means.

The Parkway Corridor

6211 Areas of special concern are defined within which public acquisition, improvement, and regulation are recommended -- the immediate roadside, primary vista corridor and secondary vista corridor.

6212 The Immediate Roadside

This band on either side of the roadway, generally 50' to 100' in width, extends to the nearby stands of trees at the edge of the roadside, or to fences, banks, or other features tending to define the roadside area. No specific limits of this area are indicated on the plan diagram. This strip is of great importance to the scenic values of the parkway. Here buildings, grading, clearing, planting, and access roads should be carefully regulated.

1. All utilities should be placed underground.
2. Landscaping of private lands and private drives should be reviewed.
3. Suitable building setbacks should be established.
4. In commercial areas, particular attention should be given to signs, planting and building.

6213 Primary Vista Corridor

The lands in view beyond the roadside determine the character of the parkway and are thus designated as the "Primary Vista Corridor". This corridor takes in the nearby ridges viewed from the road and includes the foreground, up to an arbitrary 1000', where long vistas extend up valleys beyond the corridor. It is not practical to prohibit all building within this corridor, but in the development of individual properties, building construction and planting should be designed to be compatible with and retain the natural and rural appearance of the area.

1. Structures, fences and planting should be sensitive in materials and color to the natural and rural setting.
2. Special architectural, site, and landscaping controls should be developed giving attention to private roads and measures to prevent landscape scars.
3. Landscaping of sites, public and private, should be in keeping with the natural landscape leaving where possible, native trees, open grasslands, and using native plant materials or other plants in keeping with the natural scene.
4. Building and development should be compatible with the distant views.
5. Guidelines should be established for building and planting.
6. Special restrictions should be placed on removal of natural vegetative cover.

6214 Secondary Vista Corridor

In the secondary vista corridor, including hills in the middle distance and the land in view down open valleys, all major projects should be carefully reviewed and stringently regulated to prevent any significant alterations of the natural scene.

1. Tree cutting should be stringently controlled.
2. Major structures and scientific installations should be as unobtrusive as possible in siting and construction.
3. Proposed road cuts, grading, or disturbance of grasslands, should be reviewed for impact on the parkway and be kept to a minimum.

Circulation

6215 The plan diagram establishes general routes for roads, trails and paths for local and through use. These routes will serve both general travel needs and provide recreation opportunities.

6216 Roads. The lower portion of Alpine Road, from the Alameda de las Pulgas to Willowbrook Drive, is an essential traffic carrier for Portola Valley but it should be visually subordinated to other features within the Parkway to the extent feasible. Protection of the visual quality and mitigation of traffic impact in the parkway corridor should be given highest priority when any changes in the road are made to increase traffic capacity or traffic safety.

- 6217 In the section of Alpine Road between Portola Road and the intersection of the Junipero Serra Freeway (Route 280) some improvements will be needed to increase safety and capacity. Special consideration should be given to measures to control traffic flow in the section between Westridge Drive and Route 280, to increase the efficiency and safety of the present facility.
- 6218 Between Portola Road and a point 2,300 ft. south of Willowbrook Road, the present facility with minor improvements should be adequate for anticipated future traffic. The segment of this stretch that is south of Corte Madera Road has unique scenic qualities but due to difficult curves is recognized as presenting traffic safety problems that should be corrected. Consideration should be given to realigning the sharp and sudden curves in this area while protecting the scenic qualities of the roadside to the maximum extent feasible.
- a. From the point 2,300 ft. south of Willowbrook road, Alpine Road is in the steep sided canyon of Corte Madera Creek. Substantial widening or realignment in this narrow canyon is not possible without destructive cuts and fills so that this portion should remain as a narrow, winding, low capacity route -- a single land road in some areas with turnouts for passing.
- 6219 Consideration should be given to closing a section of Alpine Road to vehicular traffic between Damiani Creek and Ciervos Road and providing an alternate routing on the west side of Corte Madera Creek generally following existing private roads. If this is done, this section of Alpine Road should be kept for trail purposes.
- 6220 Above Ciervos Road consideration should be given to closing Alpine Road to general public vehicular travel and maintaining the route for walking, riding, bicycling and for emergency and service vehicles. Access to abutting properties should be provided from other roads connecting to Skyline Boulevard.
- 6221 Trails and Paths. Trails and paths along the parkway will serve both general travel and recreation needs for both local and through traffic, connecting with destinations outside of this parkway. The creekside is particularly suited to trail use because of the relatively few road crossings. The paths and trails shown are diagrammatic. Precise alignment will require more detailed studies giving more consideration to terrain and particular points of interest. The Trails and Paths Element indicates general routes through the parkway. It further defines the standards and principles and the relationship of the trails and paths in the parkway to other local and through routes leading to destinations outside the parkway. The

following types of trails and paths are shown on the parkway plan and are defined in the Trails and Paths Element: hiking trail, riding trail, pedestrian path, bicycle lane, bicycle path, through trail or path, local trail or path.

Land Use

6222 A policy statement issued by the Town of Portola Valley, July 1969, indicates the nature of uses of land considered to be suitable for parkway.

The policy of the Town of Portola Valley has always been to maintain a tranquil, rural atmosphere, and to preserve a maximum of green open space. The Alpine Parkway should be developed in accord with this policy. The natural look and feeling of the land between the road and the creek should be maintained. Trees and natural growth should be preserved and increased. Recreational uses should be in keeping with a peaceful and rural atmosphere.

We recognize that a parkway along a public road should be for public use. The hiking and riding trail, and the bicycle path will be open to everyone. The Little League field, the soccer field, the Alpine Beer tavern, and the tennis clubs, are existing public and semi-public uses. Aside from this we envision opportunities for peaceful, uncrowded recreation, for the benefit of the residents of the Town, and others. In order not to attract crowds that would make this impossible, we feel that there should be no advertisement to the transient passer-by, such as picnic tables visible from the road, or visible parking areas.

6223 The recreation uses proposed in this plan conform to this concept of a parkway.

1. The creeksides and adjacent meadows should be considered as a natural reserve -- a wildlife conservation area to be protected from over use -- with only such uses permitted as are consistent with conserving these still natural areas.
2. The creeks themselves, with running water and the plants and creatures associated with the creeks, are features of principal interest for those using paths and trails.
3. Sufficient public access to creeks and creeksides is essential to the enjoyment of the parkway and opportunities should be provided for public use of this tranquil and natural landscape.
4. Recreation sites should be small in scale and access chiefly limited to trails and paths.

5. Areas of special educational interest should be identified for nature study and conservation education programs.
6. Viewpoints, groves of trees, and creek areas of special interest should be identified as destinations for paths and trails.
7. Sites appropriate for group use by children should be identified -- such as small natural amphitheaters and clearings suitable for club activities and school excursions.
8. Near Skyline Boulevard in woods and open areas, picnic sites and trail loops suitable for use in connection with the proposed Skyline Scenic Regional Recreation road should be considered, with improved roads to serve this area only.

PLAN DIAGRAM

- 6224 The plan diagram consists of sheets 1 through 5 which are found in Pocket 4 following Part 6.

Plan Diagram Notations

- 6225 The parkway corridor divides naturally into two sections -- the lower rolling foothill section which contains the meander of the San Francisquito and Los Trancos creeks, and is characterized by gentle grades, rounded contours of grassy oak studded knolls, contrasted with steep hillsides densely wooded with dark green live oaks and chaparral, and the upper section in the narrow canyon of the Corte Madera Creek, where Alpine Road closely follows the creek then climbs to the northern ridge and finally emerges from the forest to the open hilltops near the Skyline.
- 6226 Notations on the plan diagram mark specific features along the route -- vistas, recreation sites, problems where protective action is indicated. Some specific features have been noted to point up some of the important kinds of actions, programs and regulations that should be initiated at this time. Other notes indicate actions needed in the future. The following notations are all keyed to the plan diagram and numbered.

Sheet #1

- 6227 This portion of the parkway is beyond the Town limits and the primary actions will be needed by other jurisdictions.
1. View across golf course to East Bay hills; should be protected through regulations.

2. Overhead wires on both sides of road from Junipero Serra Boulevard for at least 1/2 mile to south. Undergrounding program is needed.
3. Small meadow with stand of buckeye trees; needs protection.
4. Corridor along path is arbitrarily set at 200 feet although views may be more distant; preserve tree cover.
5. Very harsh roadside, additional grading and low landscaping needed.
6. First view (after starting from north end of parkway) of Jasper Ridge and most importantly the Skyline; should be kept open; special control of structures and tree planting needed.
7. View of freeway interchange, Ladera, Westridge and Skyline.
- 8-
10. Left open.

Sheet #2

- 6228
11. Bare freeway ramps to west, groves of trees to east; landscaping of bare portion of freeway interchange area should complement this.
 12. Harsh bank needs to be planted in harmony with tree cover on east side of road.
 13. Tree canopy - valuable for sequence of views. Road widening would damage this.
 14. Shopping and professional centers of excellent design, buildings with good roof lines, and planting screening auto parking; quality should be maintained. The internally lighted portion of the roadside sign for the shopping center strikes a discordant note and should be modified.
 15. Creek in this area has water through much of year. Creekside suitable for casual recreation for children.
 16. Band of very large oaks screens houses from parkway; these trees need protection.
 17. Dairy Ranch - buildings, barns, fenced pastures; pleasant visual qualities.
 18. Vista to Skyline; keep view open.
 19. Pathways up hill appear to present erosion problems.

20. Antenna - project on immediate creekside plain; a jarring visual element.
21. Residential development. Presents opportunity to enlist cooperation in keeping planting and building in view of parkway compatible.
22. Left open.
23. This meadow and group of trees are examples of creekside elements valuable to parkway. Special protection needed. Present development and use for Little League has undesirable visual aspects and creates traffic hazards.
24. Creek flow in summer picks up at about this point after disappearing in creek bed upstream.
25. Views of hills and oaks important to parkway.
26. Shallow creekside bowl bordered by trees - suggests possible recreation opportunities particularly with alternate road routing further away from creek. Vista to mountains.
27. View of ridge behind Stanford, radio telescope, etc.
28. Vista to mountains.
29. Steep wooded canyon and hillside (Stanford land); extreme care will be needed in design and construction if these lands are developed in the future. Would be desirable to maintain as permanent open space.
30. Diversion ditch to Felt Lake.
31. Dam on Los Trancos Creek diverts water to Felt Lake.
32. Rossotti's; historic monument; strict architectural and site development controls enforced.
- 33-
50. Left open

6229 Sheet #3

51. Vista to Skyline; keep open.
52. Tree covered, steep roadside (subdivided); any change in this area would have significant impact on views from road.
53. This stretch of creek dominated by tall alders and bays; protect.

54. Residences. Cooperative action needed in unifying planting and fencing and to decrease adverse visual impact because of unsympathetic use of materials and color.
55. Alpine Hills road scars visible; roadside planting could filter this view.
56. Portola Valley Garage - appropriate screen planting needed to mitigate adverse visual qualities; painting with earth-tone color would help.
57. Open vistas of Skyline to north and west; preserve.
58. Residences - yards close to roadside.
59. Residential development close to roadway.
60. Vista opens up of Skyline range to the north; protect view.
61. Quarry- large scar visible; needs screen planting.
62. Residential and commercial development near roadway (need for screening landscape control); replace exotics with more compatible planting.
63. Commercial development, Nathhorst Triangle.
64. Residential development near roadside.
65. Vista to hills; keep open.
66. Corte Madera School - review coordination with parkway opportunities.
67. Residential development fairly well screened by hillside planting; screen plantings should be kept.
68. Vista to Bay; keep open.
69. View of field in Portola Valley Ranch development. Review for impact on parkway.
70. Wide view of hillsides and mountains; keep open.
71. Good near view of fields and trees in Portola Valley Ranch development; review of impact of development on parkway.
- 72-
79. Left open.
80. Corte Madera Preserve, a beautiful stretch of the creek and related uplands located at the junction of trails, should be kept largely in its natural state for the enjoyment of users of the trail and path system.

6230 Sheet #4 and Sheet #5

81. Strip of creekside dedicated to Town for park purposes.
82. Steep hillside on both sides of canyon.
83. Narrow road along canyon above creek and very steep bank above road. Road which can only be widened for occasional turnout, and parking space.
84. Occasional flats along creek will allow for small recreation areas for creek play and trail stops.
85. A number of footpaths follow along the creek; care needed to minimize erosion on steep slopes.

Upper Alpine Road

- 6231 For this portion of the parkway, suggested for closing to general public vehicular travel in the future, recommendations are more descriptive and are not keyed by number to the diagrams.
- 6232 In the lower canyon woods are dense -- maple, bays, oaks, and ferns on steep north banks. At intervals, along the creek, there are a number of small flats -- suitable recreation sites for trail destinations, informal picnic places and creek play. Informal paths exist along the creek.
- 6233 Occasional property access roads cross the creek and there are scattered homes along the hill. Additional access roads, bridging and building would seriously threaten the wild quality of this part of the parkway. Trash dumped from the road now mars the creek; more control and maintenance needed.
- 6234 Just below Joaquin Road, the entrance to Vista Verde, the canyon widens and vegetation changes to oaks, buckeyes, madrones and Douglas fir and brush. Just beyond Joaquin Road, Alpine Road now crosses the creek, and climbs by sharp switchbacks to a narrow ridge. Coal Mine Ridge comes into view across the canyon to the south and from a few vista points along the road there are panoramic views across the Bay plain to the east.
- 6235 Nearing the summit the road goes under a canopy of trees in a dense oak forest, then emerges on the edge of small grassy meadows near the Page Mill Intersection. In this part of the parkway are possible sites for some sort of developed picnic spots and loop trails that could be a part of the Skyline Scenic Regional Recreation Road.
- 6236 Fine vista points near the intersection of Page Mill and Alpine Roads overlook Montebello Ridge and the range of the Santa Cruz Mountains to the south.

INTRODUCTION

Appendix 1, Chronology of Amendments to the General Plan, Summary of Major Revision Programs and CEQA Compliance

The table on the following page lists all Planning Commission and Town Council resolutions which adopted (A) or amended (Am) elements of the General Plan. The table indicates only those elements substantively affected by the resolutions. Brief historical summaries of the major revision programs are described below. All background reports and studies pertinent to the initial adoption and amendment of elements listed continue to constitute a part of the record for the General Plan. The method of establishing compliance with the California Environmental Quality Act is also indicated on the table.

1969-1973 Amendments

Amendments during this period generally added elements which more fully developed general policies already in the General Plan or added elements newly required by state law. The amendments did not greatly affect fundamental aspects of the plan.

1977 Amendments

The 1977 revision resulted in a major reorganization of the General Plan and major substantive changes. The 1977 revisions commenced with the formation of a General Plan Review Committee (GPRC) at a joint Planning Commission-Town Council meeting on November 20, 1974. This committee met periodically and reviewed the General Plan to determine what amendments and revisions were needed. On May 28, 1975, the Town Council received the GPRC's report, which had been reviewed by the Planning Commission, and declared its intention to proceed with certain revisions. The amendments subsequently carried out were the preparation of the Seismic Safety/Safety Element, Noise Element and Scenic Highways Element, all of which were adopted in 1975. The committee then undertook a review of the existing General Plan to determine those portions of the plan in need of modification. Based on the recommendation of the committee, a consultant proposal was submitted and approved by the Town Council on August 12, 1975.

The consultant worked with the GPRC through April of 1976. The meetings of the GPRC during this period as well as since its inception were open to the public and public input was solicited. The major changes considered by the GPRC during this period included land use modifications in response to data and policies contained in the Seismic

Safety/Safety Element, changes in the circulation system to reflect changes in Town policy over the years and modifications to better tailor the plan to the Town's planning area since the plan had previously been prepared for a larger planning area. Of particular importance was the addition of a new residential land use category, "Conservation-Residential." The results of the GPRC were subsequently presented to the Planning Commission at its meeting of March 17, 1976. The Commission then recommended that the Town Council authorize the consultant to undertake the next step, which was the preparation of the Proposed Revised General Plan.

Chronology of Adoption and Amendments to General Plan
and Index to CEQA Compliance

A = Adoption
Am = Amendment

A = Adoption Am = Amendment	General Plan Elements																		
	Planning Commission		Town Council		Land Use	Circulation	Housing	Conservation	Open Space	Noise	Scenic Highways	Seismic Safety/ Safety	Recreation	Alpine Parkway	Northern Sphere** of Influence	Nathorst Triangle Area	Trails and Paths	CEQA Compliance*	
	Date	Resol. #	Date	Resol. #															
05/19/65	1965-17	07/08/65	1965-48	---	A	---	A	---	A	---	A	---	A	---	A	---	A	---	A
08/20/69	1969-82	10/08/69	259-1969				A												
07/15/70	1970-93	09/09/70	302-1970										A						
07/15/70	1970-93	10/14/70	306-1970															A	
02/17/71	1971-97	05/12/71	329-1971											A					
04/21/71	1971-100	08/11/71	344-1971												A				
04/04/73	1973-126	05/23/73	422-1973															A	
05/16/73	1973-128	06/13/73	424-1973																
07/30/75	1975-147	08/13/75	572-1975																
12/03/75	1975-152	01/14/76	602-1976																
03/02/77	1977-169	08/24/77	701-1977																
03/05/80	1980-199	03/26/80	834-1980																
02/06/80	1980-198	05/28/80	845-1980																
09/15/82	1982-241	10/13/82	1007-1982																
09/15/82	1982-239	11/10/82	1009-1982																

*This column indicates how the adoption and/or amendment was reviewed with respect to the California Environmental Quality Act. The documents referred to are on file at Portola Valley Town Hall.

CE - Categorical Exemption

ND - Negative Declaration

** In the 1977 revision, the material in the Northern Sphere of Influence Element was distributed to the other elements and the Northern Sphere of Influence Element was deleted from the plan.

During the review and revision of the General Plan, numerous background materials were used, most of which are mentioned elsewhere in the appendices. Several maps not mentioned elsewhere and which were important inputs in the revision of the Land Use Element in particular were:

"Property Ownership 1975, Town of Portola Valley, Developable Areas as Delineated on Stability Map, 1" = 500', 12/3/75, revised 12/5/75"

"Slope of the Land, Town of Portola Valley, 1" = 1,000', June 1972"

"Major Property Ownership 1975, Town of Portola Valley, 1" = 1,000'"

1980 Amendments

On June 13, 1979, the Town Council established a General Plan Review Committee to undertake an annual review of the General Plan. The committee, composed of members of Town committees, held a number of meetings and concluded its deliberations on August 13, 1979 with recommendations to the Planning Commission. The Planning Commission and Town Council held numerous public hearings between August 1979 and May 28, 1980 at which time the Council adopted a set of revisions to the General Plan. A major change to the plan was to change the slope-density standard for the Conservation-Residential category from 1 ac. - 9 ac. to 2 ac. - 9 ac.

LAND USE ELEMENT

Appendix 1, Holding Capacity

The holding capacity of the General Plan is an estimate of the total number of dwelling units and persons that could be accommodated within the planning area under the plan proposals when, and if, the land is fully developed. It is a maximum figure and may be approached in time, but will probably never be achieved. The holding capacity shows a reduction in the overall holding capacity projected at the time the General Plan for the Portola Valley area was originally prepared in 1964. This reduction is primarily a result of greater awareness by the Town of development constraints imposed by unstable lands and conscious policies to reduce unnecessary exposure of persons and property to potential geologic hazards. The dwelling unit and population holding capacities were derived in the following manner.

1. Within existing subdivisions, counting the number of existing houses, vacant buildable lots and potential lots that could be created through resubdivisions,
2. applying the residential land use intensity standards and policies 1/ contained in Sections 2106, 2106a and 2106b of the Land Use Element to lands in undeveloped areas and obtaining an estimate of the potential number of building sites,
3. adding the number of sites from 1 and 2 above to obtain the dwelling unit holding capacity, and
4. multiplying the number of sites by the estimated household size to yield a population holding capacity.

The holding capacity for the General Plan is as follows:

1/ see A1-2100, Page 4 for footnote

PLANNING AREA

Residential Area	Land Use Intensity	Estimated 1976 Dwelling Units <u>2/</u>	Holding Capacity	
			Dwelling Units	Population (3.0 persons/dwelling unit) <u>3/</u>
1	Low-Medium	172	194	582
2	Low-Medium	113	154	462
3	Low-Medium	30	35	105
4	Low-Medium	520	533	1,599
5	Low-Medium	<u>135</u>	<u>157</u>	<u>471</u>
		970	1,073	3,219
6	Low	47	61	183
7	Low	<u>458</u>	<u>572</u>	<u>1,716</u>
		505	633	1,899
8	Conservation Residential	243	295	885
9	Conservation Residential	14	272	816
10	Conservation Residential	77	143	429
11	Conservation Residential	<u>19^{4/}</u> 353	<u>121^{4/}</u> 831	<u>363^{4/}</u> 2,493
12	Open Residential	<u>13</u>	<u>70</u>	<u>210</u>
Totals		1,841	2,607	7,821 approx. 7,800

Totals may not add due to rounding

2/, 3/ and 4/ see A1-2100, Page 5 for footnotes

TOWN OF PORTOLA VALLEY

Residential Unit	Land Use Intensity	Acres	Estimated 1976 Dwelling Units ^{2/}	Holding Capacity	
				Dwelling Units	Population (3.0 persons/dwelling unit) ^{3/}
1	Low-Medium	90	172	194	582
2	Low-Medium	50	113	154	462
3	Low-Medium	30	<u>30</u> 315	<u>35</u> 383	<u>105</u> 1,149
6	Low	110	47	61	183
7	Low	930	<u>458</u> 505	<u>572</u> 633	<u>1,716</u> 1,899
8	Conservation Residential	1,020	243	295	885
9	Conservation Residential	750	14	272	816
11	Conservation Residential	860	<u>19^{4/}</u> 276	<u>121^{4/}</u> 688	<u>363^{4/}</u> 2,064
12	Open Residential	2,210	13	70	210
Totals		6,050	1,109	1,774	5,322 approx. 5,300

Totals may not add due to rounding

2/, 3/ and 4/ see A1-2100, Page 5 for footnotes

1/ The holding capacity for undeveloped lands was calculated by applying the residential land use intensity standards and taking into consideration analysis for each undeveloped parcel of slope, unstable lands, and land that could be reasonably developed within the objectives and principles of the Land Use Element. In some cases, holding capacity as a result of the other factors analyzed is less than would be expected if only the basic land use intensity standard was applied. This is true in particular for lands with identified severe geologic stability problems whose holding capacity was calculated as follows:

1. Areas of geologic instability (Pmw, Ms, Pd, Psc, Md, Pf) and areas of geologic stability (Sbr, Sun, Sex, Sls, Ps) were identified. These areas are shown on the map "Movement Potential of Undisturbed Ground" for Potola Valley as of 1/23/76.
2. The land use intensity standards for the parcel were determined from the general plan diagram and Section 2106 of the Land Use Element. The methods of applying the standards are those in effect in the Portola Valley zoning ordinance.
3. The land use intensity standards were applied to geologically stable areas providing a dwelling unit yield for stable lands.
4. The land use intensity standards were applied to the geologically unstable lands to obtain a dwelling unit yield that would be expected if there were no severe geologic constraints present. Then, to account for geologic instability, the yield was reduced by 90%. This reduction stems from the provisions of Sec. 2106 b. of the General Plan. It was assumed that the remaining dwelling unit yield of 10% could be transferred to stable portions of the same parcel.
5. The dwelling unit yield from 3 and 4 above were added to obtain total parcel holding capacity.

2/ Estimated numbers of dwelling units have been made from available records for approximately May 1976. The records were least accurate for areas 5 and 10; however, due to the small number of dwelling units in these areas, minor inaccuracies would not significantly affect the planning area totals.

3/ In the 1980 U.S. Census, the persons per housing unit in Portola Valley was 2.92 and excluding The Sequoias it was 2.82. For purposes of projecting holding capacity, the figure has been rounded to 3.0.

4/ Residential Area 11 includes The Sequoias; however, the number of dwelling units and persons at The Sequoias are not included in the Area 11 figures. Since the population at The Sequoias varies from between 250 and 300, the total holding capacity for the Town is approximately 5,600 and for the planning area approximately 8,100.

LAND USE ELEMENT

Appendix 2, Implementation

A wide range of recommendations are set forth in Appendix 5 of the Portola Valley General Plan adopted in 1965 pertaining to land use and other subjects. The major recommendations for regulations have been put into regulation form in the intervening years. Some recommendations are of a more general nature and may still need to be implemented. Other recommendations are no longer appropriate. To the extent the recommendations are still applicable, the reader is referred to that appendix.

The 1977 General Plan amendments included provisions regarding a new "Open Residential" category, revised guidelines for clustering, allowance of only partial density credit for unstable lands, impervious surface limitations, new provisions for accessory living quarters and other matters. These changes have been reflected in amendments to the zoning ordinance.

The 1980 General Plan amendments, among other matters, increased the minimum parcel size in the "Conservation-Residential" category from one to two acres. This change has been reflected in the zoning ordinance.

The "Open Space Program, Town of Portola Valley, May 1969" as adopted should be reviewed against the revised General Plan and appropriate modifications made.

Those implementation recommendations for elements other than the Land Use Element are included either in the elements or in appendices to the elements.

OPEN SPACE ELEMENT
Appendix 1, Open Space
Proposal Matrix

OPEN SPACE PROPOSAL	OPEN SPACE LAND, USE* State Requirements				RELATIVE SCALES OF OPEN SPACE**		
	Preservation of Natural Resources	Managed Production of Resources	Outdoor Recreation	Public Health and Safety	Macro-	Intermediate	Micro-
Residential Open Space preserve	P		s	P	P	x	x
Wooded Conservation Area	P			s		P	x
Parkways	P		s	s	P	x	x
Greenways	P		s	s	P	x	x
Open Space-Limited Development	P		s	P	P	x	x
Open Space Preserve	P			s	P	x	x
Community Park	s		P	s		P	x
Community Preserve	P		s	s		P	x
Neighborhood Park	s		P	s		P	x
Neighborhood Preserve	P		s	s		P	x
Trails and Paths			P	s			P
Historic Sites	s		P				P

*Open Space Land, Use

Indicates the responsiveness of the Portola Valley open space proposals to the California State law requirements.

P--Indicates primary relationship

s--Indicates secondary relationship

**Relative Scales of Open Space

Index of the relative scales of open space. For definitions of macro-, intermediate-, and micro-scales, see "Definitions" in "Introduction" of Open Space Element.

P--Primary Scale

x--Secondary Scale

OPEN SPACE ELEMENT

Appendix 2, Open Space Element Work Program

Review and Evaluation

1. Determination and coordination of open space concerns and efforts of public and private agencies and groups.
 - a. Assemble and review Conservation Committee memos on stream flow and drainage control.
 - b. Review Soil Conservation Service study on flooding along creeks.
 - c. Work with Town Historian to determine important historic features.
 - d. Work with Herb Dengler to determine fragile biotic areas.
 - e. Work with Woodside Fire District officials and use experiences of other agencies to further determine critical fire hazard areas and mitigation measures.

Graphic Description of Problem Areas*

1. Mapping completed:
 - a. Topographic Base (From U.S.G.S. sheets).
 - b. Slope of Land
 - c. Relative Land Stability
2. Mapping to be completed:
 - a. Soils
 - b. Vegetative Cover
 - c. Water Features
 - d. Fire Hazard
 - e. Biotic Communities
 - f. Existing Land Use (update 1963 land use map)
 - g. Areas of Visual, Historical, and Cultural Significance
3. Completion of Open Space Element Plan Diagram - Delineation of new open space areas.

*All mapping is to be completed on sepia reproducibles taken from topographic base map; scale 1" = 1000 feet.

Continuing

The economics of open space - continuing evaluation of the economic feasibility of preservation of open space as critical areas are threatened by development. Determination of specific methods of implementation is necessary once it is established that open space preservation is desired.

TRAILS AND PATHS ELEMENT

Appendix 1, Implementation

Techniques

In the undeveloped parts of the Town, trails and paths can be obtained largely through regulations, primarily the subdivision and zoning ordinances. Public funds will be needed, however, for planning, for acquisition of some easements, and for development of some trails and paths, both in the developed and undeveloped parts of the Town. In addition, money and talent will be needed for maintenance. For a full discussion of methods of obtaining easements through regulation and purchase, see Part II, "Methods of Implementation" of the Open Space Program for the Town of Portola Valley dated May 1969.

Steps

1. Determine Financial Feasibility. Indicate the routes that are to constitute the public system and determine the construction costs and annual costs of maintenance. The analysis should help indicate whether the system is approximately in balance with reasonable public expenditures (Town, County, Federal and State). Methods of obtaining voluntary maintenance should be pursued, such as having specific organizations (user groups) assume responsibility for routine maintenance under Town supervision.
2. Set Project Priorities. Securing easements in critical places where they cannot be obtained by regulation is of first importance, especially where the chance of donation seems possible. In general, projects selected should try to serve the maximum number of residents while trying to balance the interests of walkers, riders and bicyclists. Worthy of first consideration is the pedestrian path system for school children, and an attempt to eliminate hazardous road crossings.
3. Conservation Easements. Efforts to acquire easements in the developed part of the Town (only a few are implied by the proposed plan) might be coordinated with an effort to secure conservation easements as guided by the Open Space Program of the General Plan. The effort should be aimed at salvaging as much as possible of the two or three canyons remaining undeveloped which are followed by trails. The rewards will be in the distant future when the pressures to further subdivide these canyons will arrive, and with it, the pressures to eliminate such trails and open space.
4. Proceed Project by Project to Implement the Plan. Projects should be detailed on the 1 inch equals 200 feet Town base maps and care taken to follow the construction, route selection and inspection procedures as adopted by the Town in the Trail and Path Standards.

Maintenance of Trail and Path Information

The location of new trail and path easements should be added annually to the master set of trail maps on file at Portola Valley Town Hall and the maps of existing trails and paths similarly kept current. Money and staff time for this work will be needed.

A record of construction and maintenance costs, private developer costs, as well as Town costs, should be kept to guide future work to build and maintain the system. A Town trail inspector aided by volunteers may appropriately do this work.

SEISMIC SAFETY/SAFETY ELEMENT

Appendix 1, References

- (1) William R. Dickinson, "Commentary and Reconnaissance Photogeologic Map, San Andreas Rift Belt, Portola Valley, California," July 1970.
- (2) William R. Dickinson, "Fault Lines Mapped by W.R. Dickinson, November 1971," (a map prepared to accompany reference #1 above).
- (3) A.M. Johnson, W.R. Dickinson, S. Ellen, and A. Lobo-Guerrero, 1970; C. Price, 1970; J. Rodine, 1974, "Geologic Map" and "Land Movement Potential of Undisturbed Ground Map" of Town of Portola Valley, California; Unpublished Maps, Town Hall, Town of Portola Valley, California.
- (4) California Division of Mines and Geology, "Special Studies Zones Maps," maps at scale 1" = 2000' for USGS Mindego Hill and Palo Alto quadrangles, Sacramento, California, 1974.
- (4a) Woodward-Clyde Consultants, "Results of Fault Study Conducted for the Town of Portola Valley, Portola Valley Elementary School Site," August 9, 1976.
- (4b) Woodward-Clyde Consultants, "Results of Phase II Fault Study-Town of Portola Valley, Portola Valley Elementary School Site," September 29, 1976.
- (4c) H.J. Degenkolb & Associates, "Structural Evaluation of the Portola Valley School Site," June 28, 1972.
- (4d) H.J. Degenkolb & Associates, letter to Town Council, Town of Portola Valley regarding Portola Valley School Site, November 11, 1976.
- (5) R.D. Borchardt, Editor, Studies for Seismic Zonation of The San Francisco Bay Region, Geological Survey Professional Paper 941-A, 1975.
- (6) Joint Committee on Seismic Safety, Meeting the Earthquake Challenge, Sacramento, State of California, January, 1974.
- (7) California Division of Mines and Geology, Urban Geology Master Plan for California, Sacramento, State of California, 1973.
- (8) A.C. Lawson, et al, Report of the State Earthquake Investigation Commission, Washington, D.C., The Carnegie Institution, 1908, reprinted 1969.

- (9) Robert D. Brown, Jr., Active Faults, Probable Active Faults, and Associated Fracture Zones, San Mateo County, California (Miscellaneous Field Studies Map MF-355), Basic Data Contribution No. 44, San Francisco Bay Region Environment and Resources Study, U.S. Dept. of the Interior (USGS) and the U.S. Dept. of Housing and Urban Development, Menlo Park, California, 1972.
- (10) R.E. Wallace, "Earthquake Recurrence Intervals on the San Andreas Fault": Geological Society of American Bulletin, V.81, p.2875-2890, 1970.
- (11) J.C. Cummings, "Earthquake Magnitudes, Recurrence Intervals, and Seismic Safety Planning, San Andreas Fault System, California: Geological Society (London)", Miscellaneous Paper 3, p.3 - 22, 1974.
- (12) Robert E. Wallace, Goals, Strategy, and Tasks of the Earthquake Hazard Reduction Program, U.S. Geological Survey Circular 701, USGS - Reston, Va., 1974.
- (13) P.B. Schnabel, and H.B. Seed, "acceleration in Rock for Earthquakes in the Western United States": Earthquake Engineering Research Center Report, University of California, Berkeley, June, 1972.
- (14) H.B. Seed, et al, "Characteristics of Rock Motions During Earthquakes" Journal of Soil Mechanics and Foundations, Div. ASCE, Vol.95, pp. 1199-1218, September 1969.
- (15) D.R. Nichols and J.M. Buchanan-Banks, Seismic Hazards and Land-Use Planning, Geological Survey Circular 690, Reston, Va. 22092, U.S. Dept. of the Interior, 1974.
- (16) National Oceanic and atmospheric Administration Environmental Research Laboratories, A Study of Earthquake Losses in the San Francisco Bay Area, (Washington, D.C.), U.S. Dept. of Commerce, 1972.
- (17) Earl B. Brabb and E.H. Pampeyan, Preliminary Geologic Map of San Mateo County, California, Basic Data Contribution No. 41, in the series "San Francisco Bay Region Environment and Resources Planning Study," U.S. Dept. of the Interior (Geological Survey), and U.S. Dept. of Housing and Urban Development, 1972.
- (18) Earl Brabb, Earl Pampeyan, and Manuel G. Bonilla, Landslide Susceptibility in San Mateo County, California, Basic Data Contribution No. 43, in the series "San Francisco Bay Region Environment and Resources Planning Study," U.S. Dept. of the Interior (USGS) and U.S. Dept. of Housing and Urban Development, Menlo Park, California, 1972.

- (19) Earl Brabb and Earl Pampeyan, Preliminary Map of Landslide Deposits in San Mateo County, California, Basic Data Contribution No. 42, in the series "San Francisco Bay Region Environment and Resources Planning Study," U.S. Dept. of the Interior (USGS) and U.S. Dept. of Housing and Urban Deveopment, Menlo Park, California, 1972.
- (20) U.S. Soil Conservation Service, "Type 15 Flood Insurance Study," Portola Valley, California, 1971.
- (21) Jones-Tillson & Associates, "Master Storm Drainage Report for the Town of Portola Valley," Unpublished Report, Town Hall, Town of Portola Valley, Portola Valley, California, 1970.
- (22) S.T. Limerinos, K.W. Lee, and P.E. Lugo, Flood Prone Areas in the San Francisco Bay Region, California, Interpretive Report No. 4, in the series "San Francisco Bay Region Environment and Resources Planning Study," U.S. Dept. of the Interior (USGS) and U.S. Dept. of Housing and Urban Development, Menlo Park, California, 1973.
- (23) Wesley C. Lindsey, Report and General Soil Map, San Mateo County, California, U.S. Dept. of Agriculture, Soil Conservation Service (Half Moon Bay), revised March 1970.
- (24) W.M. Brown, III, and L.E. Jackson, Jr., Erosional and Depositional Provinces and Sediment Transport in the South and Central Part of the San Francisco Bay Region, California, Interpretive Report No. 3 in the series, "San Francisco Bay Region Environment and Resources Planning Study," U.S. Dept. of the Interior (USGS) and U.S. Dept. of Housing and Urban Development, Menlo Park, California, 1973.
- (25) Division of Forestry, Resources Agency, Dept. of Conservation, State of California, A Fire Hazard Severity Classification System For California's Wildlands, April 1, 1973.
- (26) William R. Dickenson, Reconnaissance of Active Traces of the San Andreas Fault in Woodside, 1973.
- (27) "Town of Portola Valley Emergency Plan," February 1975. (adopted April 9, 1975, by Ordinance 1975-136.

SEISMIC SAFETY/SAFETY ELEMENT

Appendix 2, Modified Mercalli Intensity Scale

(1956 Version, by Richter, as Reported in
U.S. Geological Survey Circular 690)

- I. Not felt.
- II. Felt by persons at rest, on upper floors, or favorably placed.
- III. Felt indoors. Hanging objects swing. Vibration like passing of light trucks. Duration estimated. May not be recognized as an earthquake.
- IV. Hanging objects swing. Vibration like passing of heavy trucks; or or sensation of a jolt like a heavy ball striking the walls. Standing automobiles rock. Windows, dishes, doors rattle. Wooden walls and frame may creak.
- V. Felt outdoors; direction estimated. Sleepers awakened. Liquids disturbed, some spilled. Small unstable objects displaced or upset. Doors swing. Shutters, pictures move. Pendulum clocks stop, start, change rate.
- VI. Felt by all. Many frightened and run outdoors. Persons walk unsteadily. Windows, dishes, glassware broken. Knickknacks, books, etc., off shelves. Pictures off walls. Furniture moved or overturned. Weak plaster and masonry D cracked.
- VII. Difficult to stand. Noticed by drivers of automobiles. Hanging objects quiver. Furniture broken. Weak chimneys broken at roof line. Damage to masonry D, including cracks, fall of plaster, loose bricks, stones, tiles and unbraced parapets. Small slides and caving in along sand or gravel banks. Large bells ring.
- VIII. Steering of automobile affected. Damage to masonry C; partial collapse. Some damage to masonry B; none to masonry A. Fall of stucco and some masonry walls. Twisting, fall of chimneys, factory stacks, monuments, towers, elevated tanks. Frame houses moved on foundations if not bolted down; loose panel walls thrown out. Decayed piling broken off. Branches broken from trees. Changes in flow or temperature of springs and wells. Cracks in wet ground and on steep slopes.

1/ Masonry A: Good workmanship and mortar, reinforced designed to resist lateral forces.

Masonry B: Good workmanship and mortar, reinforced.

Masonry C: Good workmanship and mortar, unreinforced.

Masonry D: Poor workmanship and mortar and weak materials, like adobe.

- IX. General panic. Masonry D destroyed; masonry C heavily damaged, sometimes with complete collapse; masonry B seriously damaged. General damage to foundations. Frame structures, if not bolted, shifted off foundations. Frames racked. Serious damage to reservoirs. Underground pipes broken. Conspicuous cracks in ground and liquefaction.
- X. Most masonry and frame structures destroyed with their foundations. Some well-built wooden structures and bridges destroyed. Serious damage to dams, dikes, embankments. Large landslides. Water thrown on banks of canals, rivers, lakes, etc. Sand and mud shifted horizontally on beaches and flat land. Rails bent slightly.
- XI. Rails bent greatly. Underground pipelines completely out of service.
- XII. Damage nearly total. Large rock masses displaced. Lines of sight and level distorted. Objects thrown in the air.

CONSERVATION ELEMENT

Appendix 1, Work Program

Completion of Conservation Element Plan Diagram

1. Development of conservation information system.
 - a. Technical Advice - largely voluntary citizen efforts; Conservation Committee, Herb Dengler, etc. Also, appropriate public agencies; Soil Conservation Service, U.S.G.S., Woodside Fire District, etc.
 - b. Information generated from Open Space Element Work Program (See Open Space Element, Appendix II).
2. Notation of specific areas of concern in map form and descriptive text.
3. Indication of specific areas of concern in need of action programs on Conservation Element Plan Diagram.

Development of Specific Action Programs

1. Establishment of conservation standards based on new technical information.
2. Existing program review and evaluation in light of new conservation standards.
 - a. Regulation -- Zoning, subdivision, site development.
 - b. Acquisition -- Full title, conservation easements, development rights.
3. New programs to be implemented based on standards of specific areas of concern described on Conservation Element Plan Diagram.

Monitoring and Evaluation - Continuing

All programs should be monitored and evaluated on a continuing basis to ensure that conservation objectives will be met and that standards are relevant.

NOISE ELEMENT

Appendix 1, Motor Vehicle Noise Analysis and Stationary and Quasi-stationary Noise Analysis

MOTOR VEHICLE NOISE ANALYSIS

This analysis is based upon two central sources of information:

1. Traffic flow data obtained by the San Mateo County Engineering Department during the period 1967-1974, and by the Portola Valley Noise Abatement Committee during the period 1972-1975.
2. Formulas and charts for traffic noise estimation provided in the report Highway Noise, A Design Guide for Highway Engineers, NCHRP Report 117, Highway Research Board, National Research Council, National Academy of Sciences-National Academy of Engineering, 1971.

The sound level unit used is the A weighted decibel (dBA), which permits a logarithmic expression of the ratio between the acoustic intensity present at a given location and the lowest acoustic intensity audible to sensitive human ears, weighted by frequency to account for the characteristics of human hearing, as defined in the American National Standards Institute, Standard S1.1, Acoustic Terminology, paragraph 2.9, or successor reference. In recognition of the fluctuating nature of traffic noise, noise levels are stated herein as "L₅₀ levels" and "L₁₀ levels" which refer to the noise level (in dBA) exceeded during 30 minutes (50 percent) of each hour and 6 minutes (10 percent) of each hour, respectively.

An examination of existing traffic flow data for the primary roadways in the Town has led to the values for peak vehicle flow and average vehicle speed given in Table 1. As the combination of peak motorcycle and automobile traffic constitutes the most severe noise impact condition on any road in the Town, the combination of peak truck and automobile traffic constitutes the most severe noise impact condition on any road in the Town, the combination of peak truck and automobile traffic, which occurs separately from the peak motorcycle/automobile combination is not considered.

From the data of Table 1, L₅₀ and L₁₀ traffic noise levels at appropriate distances from the centerline of each roadway segment may be calculated with the aid of formulas and charts provided in NCHRP Report 117, as augmented with the following prescriptions:

1. Motorcycle L₅₀ and L₁₀ levels are taken as the corresponding automobile noise levels plus 10 dBA.
2. Calculated L₅₀ and L₁₀ levels for level roadways are to be increased 3 dBA for roadways with 5-10 percent grades and 5 dBA for roadways with 10-15 percent grades.

- . Calculated L_{10} levels are to be increased 5 dBA in the vicinity of stop signs.

These prescriptions reflect the experience accumulated by the Portola Valley Noise Abatement Committee during 1972-1975; they are necessary for a proper assessment of traffic noise impact under the somewhat atypical traffic conditions found in the Town.

NCHRP Report 117 also provides useful criteria for acceptable traffic noise levels in adjacent land areas. The most pertinent of these for the present analysis are the recommended outdoor levels around residences: $L_{50} \leq 50$ dBA and $L_{10} \leq 56$ dBA. These recommended levels are consistent with the maximum noise levels that will permit acceptable communication between two men in face to face, normal voice conversation standing 6 feet apart. They are also consistent with the desirability of allowing L_{50} traffic noise levels to exceed the local ambient levels by no more than 10 dBA. The recommended outdoor levels of NCHRP Report 117 have been used in the present analysis to define land areas that suffer various degrees of traffic noise impact as specified in Table 2. These criteria, along with the calculated L_{50} and L_{10} traffic noise levels for each of the roadway segments listed in Table 1, permit the construction of Tables 3 and 4 and of Figures 1 and 2.

Tables 3 and 4 list half-width outer dimensions for the light, medium and heavy impact zones along the roadway segments of Table 1. Because of the rather low volumes that characterize traffic flow within the Town, the L_{10} impact zone dimensions almost always exceed their L_{50} counterparts. Although relatively few residences in the Town lie within heavy impact zones, a significant number lie within the medium and light impact zones. Figures 1 and 2 show noise contours along the primary roadways within the Town. The effects of increased traffic volume, higher average speed and steep grade conditions are clearly manifested.

STATIONARY AND QUASI-STATIONARY NOISE ANALYSIS

The analysis is based upon three central sources of information:

1. A citizen telephone survey conducted by the Portola Valley Noise Abatement Committee, as described in its June, 1971 report to the Town.
2. Data provided in the report Transportation Noise and Noise from Equipment Powered by Internal Combustion Engines, Environmental Agency Report, PB-208660, NTID 300.12, 1971.
3. Data provided in the report Noise from Construction Equipment and Operations Building Equipment and Home Appliances, Environmental Protection Agency, PB-206717, NTID 300.1, 1971.

Again, the sound level unit used is the A-weighted decibel (dBA).

Barking dogs constitute the most significant source of annoyance among stationary and quasi-stationary noise sources in the Town. Other irritants include powered toys, (powered model airplanes, minibikes, go-carts, etc.), amplified music (stereo systems, electric instruments, etc.), powered gardening and landscaping equipment (lawn mowers, rototillers, chain saws, etc.) and construction equipment (dozers, backhoes, power saws, etc.).

A widely accepted general noise limitation in municipal noise ordinances throughout the country is that the generation of sound levels that exceed the local ambient level by more than 6 dBA at one's own property line is prohibited. In practice, this limitation serves only as an indicator of excessive noise generation, because it may be unduly restrictive under current conditions. Hence specified exceptions and/or provisions are usually introduced, as indicated in Table 5. The limitations on powered and construction equipment stated in the table are such that operators of such equipment may, over an extended period, suffer permanent hearing damage. Hence tighter limitations are certainly to be desired.

Table 1

TRAFFIC DATA

Road	Location-Between:	Peak Autos/Hr.	Peak Motor Cycles/Hr.	Average Speed
Alpine	Town Line & Westridge	300	35	45
Alpine	Westridge & Arastradero	200	25	45
Alpine	Arastradero & Portola	250	30	40
Alpine	Portola & Corte Madera	100	< 10	30
Portola	Alpine & Westridge	250	30	40
Portola	Westridge & Wyndham	250	30	30
Portola	Wyndham & Town Line	250	30	45
Westridge	Alpine & Cervantes	200	< 10	35
Westridge	N. Cervantes & W. Cervantes	100	< 10	30
Westridge	W. Cervantes & Portola	200	< 10	35
Los Trancos	Town Line & Alpine	200	< 10	35
Golden Oak	Alpine & Peak	100	< 10	30
Cervantes	Westridge & Westridge	100	< 10	30

Table 2

NOISE IMPACT CRITERIA

Negligible Impact:	$L_{50} \leq 50$ dBA	$L_{10} \leq 10$ dBA
Light Impact:	$50 \text{ dBA} < L_{50} \leq 55$ dBA	$55 \text{ dBA} < L_{10} \leq 60$ dBA
Medium Impact:	$55 \text{ dBA} < L_{50} \leq 60$ dBA	$60 \text{ dBA} < L_{10} \leq 65$ dBA
Heavy Impact:	$L_{50} > 60$ dBA	$L_{10} > 65$ dBA

Table 3

L50 IMPACT ZONES

Road	Location	Distance from center line of road to outer limit of noise impact zone (in feet)		
	Between:	Heavy Impact	Medium Impact	Light Impact
Alpine	Town Line & Westridge	50	120	290
Westridge	Alpine & Bolivar	50	120	280
Portola	Wyndham & Town Line	40	95	230
Alpine	Westridge & Portola	35	85	200
Portola	Alpine & Westridge	35	85	200
Portola	Westridge & Wyndham	30	70	170
Westridge	Portola & Cervantes; Bolivar & Cervantes	--	50	120
Los Trancos	Town Line & Alpine	--	50	120
Golden Oak	Alpine & Tagus	--	35	85
Cervantes	Peak & Kiowa	--	35	85
Westridge	Goya & Paloma	--	--	60
Golden Oak	Tagus & Peak	--	--	35
Cervantes	Westridge & Peak; Kiowa & Westridge	--	--	35
Alpine	Portola & Corte Madera	--	--	35
Westridge	Cervantes & Goya; Paloma & Cervantes	--	--	35

Table 4

L10 IMPACT ZONES

Road	Location	Distance from center line of road to outer limit of noise impact zone (in feet)		
	Between:	Heavy Impact	Medium Impact	Light Impact
Alpine	Town Line & Westridge	100	200	400
Westridge	Alpine & Bolivar	90	160	270
Portola	Wyndham & Town Line	85	160	300
Alpine	Westridge & Portola	75	150	300
Portola	Alpine & Westridge	75	140	260
Portola	Westridge & Wyndham	60	120	220
Westridge	Portola & Cervantes; Bolivar & Cervantes	55	90	160
Los Trancos	Town Line & Alpine	55	90	160
Golden Oak	Alpine & Tagus	50	90	160
Cervantes	Peak & Kiowa	50	90	160
Westridge	Goya & Paloma	40	70	130
Golden Oak	Tagus & Peak	30	50	90
Cervantes	Westridge & Peak; Kiowa & Westridge	30	50	90
Alpine	Portola & Corte Madera	30	50	90
Westridge	Cervantes & Goya; Paloma & Cervantes	30	50	90

Table 5

POSSIBLE LIMITATIONS ON STATIONARY
AND QUASI-STATIONARY NOISE SOURCES

Source	Limitations
Barking Dog	60 dBA daytime and 40 dBA nighttime at 50 feet through training or indoor habitat for animal.
Powered Toys	Operation permitted only in designated areas.
Amplified Music	60 dBA daytime and 40 dBA nighttime at 50 feet.
Powered Equipment	Most shop and garden tools: 80 dBA at 50 feet. Chain saws, mulcher-chippers: 85 dBA at 50 feet. Operation limited to 10 a.m. - 5 p.m. period.
Construction Equipment	80 dBA at 50 feet; with operation limited to 8 a.m. - 5 p.m. time period on weekdays.

NATHHORST TRIANGLE AREA PLAN

Appendix 1, Implementation

The lands designated as community commercial on the plan diagram are zoned C-C (community commercial) and the lands designated as community service are zoned A-P (administration-professional). The key provisions of the zoning ordinance for these districts are summarized below. While most of the provisions are currently in the adopted zoning ordinance, others were recommended concurrently with the submission of this plan in a separate document entitled "Proposed Zoning Ordinance Amendments" and dated 7/72. For full information for these and other zoning districts included in the NTA, see the Portola Valley zoning ordinance and the above-referenced proposed amendments.

ZONING REGULATIONS FOR C-C AND A-P ZONING DISTRICTS

A. Uses Permitted

1. See principal, conditional and accessory uses permitted - C-C: Sections 6601.1, 6601.2, and 6601.3; and A-P: 6602.1, 6602.2, and 6602.3.
2. Section 6601 states in re C-C - "This district is intended to provide space for local retail and consumer service businesses and professional services necessary to serve the community and adjoining residential areas under conditions compatible with location within residential neighborhoods and in close proximity to residential uses...".

Section 6602 states in re A-P - "This class of district is intended to provide space for the development and operation of administrative and professional offices and related uses, serving primarily the Town of Portola Valley, in locations served by major trafficways in close proximity to commercial areas and where such administrative and professional office uses can be developed and maintained without adversely affecting nearby residential uses.

B. Parcel Area, Open Space and Bulk Requirements

1. Minimum parcel area is 1 acre. (Sec. 6200 & 6201)
2. Front yard 50', side and rear yards 20'. (Sec. 6200 & 6202)
3. Special building setback along Alpine Road is 75'. (Sec. 6209)
4. Building coverage limit is 20%, certain features such as portions of roof overhangs do not count as coverage. (Sec. 6200 & 6203.2)

5. Floor area ratio maximum is 20%. (Sec. 6200 & 6203)
6. Height limit is 36'. (Sec. 6200 & 6203.1)
7. Required open space is 25% of parcel area. (Sec. 6205)
8. Required landscaping in yards and rear structures. (Sec. 6206)

C. Off-Street Parking

1. Retail stores - 1 space/150 sq. ft. of floor area. (Sec. 6210.4)
2. Offices - 1 space/200 sq. ft. of floor area. (Sec. 6210.4)
3. Medical or dental clinics - 5 spaces/each doctor or dentist. (Sec. 6210.4)
4. Restaurants - 1 space/2.5 seats or stools (Sec. 6210.4)
5. Planning Commission can approve up to 15% reduction in number of spaces where uses share common parking area, such area to be retained as additional open space. (Sec. 6210.1G)
6. Planning Commission can approve up to 50% reduction in number of spaces for certain types of joint use (day vs nighttime use). (Sec. 6210.1F)
7. Parking spaces must be at least 9' x 18'. (Sec. 6210.1A.2)

D. Required Conditions

1. All uses and structures subject to ASCC review procedure, and stated principals and criteria. (Sec. 6601.4, 6602.4 & 6912)
2. All except a few enumerated uses must be conducted indoors. (Sec. 6601.4)
3. Limitations on processing, packaging, treating, etc. (Sec. 6601.4)
4. Development on parcels in excess of 20,000 sq. ft. shall be applied for a Planned Unit Development under the conditional use permit provisions. (Sec. 6601.4)

5. Applicant must demonstrate proposed use complies with service area or market area requirements of ordinance. (Sec. 6935.1B.3)

E. Signs

1. See regulations. (Sec. 6304)

F. Planned Unit Developments

1. Detailed plans required. (Sec. 6935.4)
2. Planning Commission may permit reduced yards. (Sec. 6202.4G)
3. Planning Commission may permit increased height limits. (Sec. 6203.1B.5)
4. Planning Commission may permit increased building coverage. (Sec. 6203.2B)

ALPINE PARKWAY PLAN

Appendix 1, Implementation

Procedure for Review by Town and Discussion with Other Jurisdictions

For the Town of Portola Valley this plan 1) identifies specific values and specific problems, 2) relates the parkway to ongoing projects such as the implementation of the Trails and Paths Plan and the Open Space Program, and 3) points the way to possible amendments to Town ordinances needed to protect the integrity of the creeks and parkway.

The plan provides a basis for formal discussions between the jurisdictions concerned. From such discussions could come:

- ° Agreement on (a) definition of the corridor, and (b) general goals of the affected communities and counties for the future of the parkway.
- ° A better understanding of the relationship of this parkway to such projects as the program for San Francisquito Creek below Santa Cruz Avenue, the Skyline Scenic Regional Recreation Road, a future Alpine Parkway to the west of the Skyline, San Mateo County's Park and Open Space Program, Palo Alto's Foothills Study, and road "improvement" programs in San Mateo and Santa Clara Counties.
- ° Greater general public awareness of the opportunities of the parkway.

Role of the Open Space Program

A number of projects important to the parkway are already set forth in the Portola Valley Open Space Program. This program should be reviewed against the Alpine Parkway Plan to determine whether any amendments are needed. Particular attention should be given to the need for public land acquisition within the corridor by the Town and other public jurisdictions.

In the section between the northern Town boundary and Los Trancos Road the narrow strips between the road and creek are considered in relation to the parkway -- some are recommended for acquisition in the Open Space Program because of their importance to the parkway and some are covered by zoning regulations which need modification.

- ° Two sections are now zoned O-A, which permits horticulture. This use should be changed from a permitted use to a conditional use, to control impact on the parkway.
- ° Setbacks of 75' are now in force along this section of Alpine Road and should be modified as necessary to protect particular features of the parkway. Additional provisions are needed governing the use of these lands in the immediate roadside area and along the creek.

- The Scenic Corridor Combining District Regulations should be revised to make specific reference to the Alpine Parkway Plan as one of the guides for review. Conditions in Section 6403.2, Regulated Areas, should be reviewed to determine whether even more stringent requirements for "immediate roadside" are needed.

From Los Trancos Road to the southern Town boundary, easements or dedications in fee should be secured as undeveloped acreage is subdivided. To the west of the road, implementation will be somewhat difficult because of the prevalence of small parcels of land. A combination of regulation and acquisition of easements or full fee title through purchase or dedication will be needed.

For the trail and path system, easements for recommended trails should be acquired as part of the subdivision process. Some easements on the west may need to be purchased. A bicycle lane in the roadway is recommended. This will require more detailed design study.

County Action

It is recommended that the Town request a resolution by San Mateo and Santa Clara county supervisors declaring mutual concern in San Francisquito and Los Trancos Creeks and their watersheds as a valuable natural resource along their common boundary and designating these streams as "scenic streams". The San Mateo County supervisors should be asked to also designate Corte Madera Creek as a "scenic stream". The entire parkway corridor should be designated as an open space scenic preserve.

Creeks

Change in creek flow of Los Trancos and San Francisquito Creeks should be investigated to determine whether there have been long term undesirable effects from diversion of waters and what remedial action, if any, may need to be taken. The need for creek bank protection in critical locations should be evaluated.

Trees

Advice of an ecologist or arborist should be sought for recommendations on tree care particularly for large important trees. Valley oaks, reportedly, are not replacing themselves. Seeding, with protection of young trees from grazing cattle and other damage for a few years could ensure perpetuation of these valuable groves on the hillsides. Introduced species of trees such as eucalyptus have seeded along the creek in some section and should be removed where undesirable. County cooperation should be sought.

Undergrounding of Utilities

The beautiful views of hillsides and mountains from Alpine Road are severely marred by the heavy concentration of overhead power lines and telephone cables. In some locations overhead wires line both sides of the road or cross from side to side. Probably no one action could enhance the appearance of Alpine Road more than the undergrounding of these lines. Portola Valley has recognized this need by establishing the Alpine Road-Portola Road route as Undergrounding District #1 in the Town. This district will slowly accumulate funds from the contributions of utility companies as required by state law. To achieve undergrounding within the foreseeable future, however, will require additional sources of funds. The Town and other affected jurisdictions including San Mateo County and Menlo Park should cooperatively seek means to carry out an undergrounding program with the responsible utility companies.

Other Programs

- ° Citizen group action is sponsoring programs for appropriate tree planting, and for encouraging cooperative actions by residents and other property owners in landscaping and maintenance compatible with the parkway.
- ° Pilot conservation education programs connected with parkway and creek opportunities.

U.C. BERKELEY LIBRARIES



C124885602

